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Commissioner

December 29, 2003

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TO: Interested Parties / Applicant

RE: ESSROC Cement Corporation / T017-6033-00005

FROM: Paul Dubenetzky  
Chief, Permits Branch  
Office of Air Quality

### Notice of Decision: Approval – Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3-7 and IC 13-15-6-1(b) or IC 13-15-6-1(a) require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, Indianapolis, IN 46204.

For an **initial Title V Operating Permit**, a petition for administrative review must be submitted to the Office of Environmental Adjudication within **thirty (30)** days from the receipt of this notice provided under IC 13-15-5-3, pursuant to IC 13-15-6-1(b).

For a **Title V Operating Permit renewal**, a petition for administrative review must be submitted to the Office of Environmental Adjudication within **fifteen (15)** days from the receipt of this notice provided under IC 13-15-5-3, pursuant to IC 13-15-6-1(a).

The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

- (1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
- (2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
- (3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

- (1) the name and address of the person making the request;
- (2) the interest of the person making the request;
- (3) identification of any persons represented by the person making the request;
- (4) the reasons, with particularity, for the request;
- (5) the issues, with particularity, proposed for considerations at any hearing; and

- (6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

Pursuant to 326 IAC 2-7-18(d), any person may petition the U.S. EPA to object to the issuance of an initial Title V operating permit, permit renewal, or modification within sixty (60) days of the end of the forty-five (45) day EPA review period. Such an objection must be based only on issues that were raised with reasonable specificity during the public comment period, unless the petitioner demonstrates that it was impracticable to raise such issues, or if the grounds for such objection arose after the comment period.

To petition the U.S. EPA to object to the issuance of a Title V operating permit, contact:

U.S. Environmental Protection Agency  
401 M Street  
Washington, D.C. 20406

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

# **PART 70 OPERATING PERMIT OFFICE OF AIR QUALITY**

**ESSROC Cement Corporation  
State Road 25 South, 3084 West County Road 225 South  
Logansport, Indiana 46947**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

**The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. Noncompliance with any provision of this permit, except any provision specifically designated as not federally enforceable, constitutes a violation of the Clean Air Act. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.**

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17. This permit also addresses certain new source review requirements for existing equipment and is intended to fulfill the new source review procedures pursuant to 326 IAC 2-7-10.5, applicable to those conditions.

Operation Permit No.: T017-6033-00005	
Issued by: Janet G. McCabe, Assistant Commissioner Office of Air Quality	Issuance Date: December 9, 2004  Expiration Date: December 9, 2008

## TABLE OF CONTENTS

### A SOURCE SUMMARY

- A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)] [326 IAC 2-7-1(22)]
- A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)]  
[326 IAC 2-7-5(15)]
- A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)]  
[326 IAC 2-7-5(15)]
- A.4 Part 70 Permit Applicability [326 IAC 2-7-2] [326 IAC 2-7-5(15)]

### B GENERAL CONDITIONS

- B.1 Definitions [326 IAC 2-7-1]
- B.2 Permit Term [326 IAC 2-7-5(2)] [326 IAC 2-1.1-9.5]
- B.3 Enforceability [326 IAC 2-7-7]
- B.4 Termination of Right to Operate [326 IAC 2-7-10] [326 IAC 2-7-4(a)]
- B.5 Severability [326 IAC 2-7-5(5)]
- B.6 Property Rights or Exclusive Privilege [326 IAC 2-7-5(6)(D)]
- B.7 Duty to Provide Information [326 IAC 2-7-5(6)(E)]
- B.8 Certification [326 IAC 2-7-4(f)] [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)(C)]
- B.9 Annual Compliance Certification [326 IAC 2-7-6(5)]
- B.10 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3)and (13)][326 IAC 2-7-6(1)and(6)]  
[326 IAC 1-6-3]
- B.11 Emergency Provisions [326 IAC 2-7-16]
- B.12 Permit Shield [326 IAC 2-7-15] [326 IAC 2-7-20] [326 IAC 2-7-12]
- B.13 Prior Permit Conditions Superseded [326 IAC 2-1.1-9.5]
- B.14 Deviations from Permit Requirements and Conditions [326 IAC 2-7-5(3)(C)(ii)]
- B.15 Permit Modification, Reopening, Revocation and Reissuance, or Termination  
[326 IAC 2-7-5(6)(C)] [326 IAC 2-7-8(a)] [326 IAC 2-7-9]
- B.16 Permit Renewal [326 IAC 2-7-4]
- B.17 Permit Amendment or Modification [326 IAC 2-7-11][326 IAC 2-7-12]
- B.18 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)]  
[326 IAC 2-7-12(b)(2)]
- B.19 Operational Flexibility [326 IAC 2-7-20] [326 IAC 2-7-10.5]
- B.20 Source Modification Requirement [326 IAC 2-7-10.5]
- B.21 Inspection and Entry [326 IAC 2-7-6] [IC 13-14-2-2] [IC 13-30-3-1] [IC 13-30-3-2]
- B.22 Transfer of Ownership or Operational Control [326 IAC 2-7-11]
- B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)]

### C SOURCE OPERATION CONDITIONS

#### Emission Limitations and Standards [326 IAC 2-7-5(1)]

- C.1 Particulate Emission Limitations for Processes with Process Weight Rates Less Than One  
Hundred (100) pounds per hour [326 IAC 6-3-2] [40 CFR 52 Subpart P]
- C.2 Opacity [326 IAC 5-1]
- C.3 Open Burning [326 IAC 4-1] [IC 13-17-9]
- C.4 Incineration [326 IAC 4-2] [326 IAC 9-1-2]
- C.5 Fugitive Dust Emissions [326 IAC 6-4]
- C.6 Operation of Equipment [326 IAC 2-7-6(6)]
- C.7 Stack Height [326 IAC 1-7]
- C.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

**Testing Requirements [326 IAC 2-7-6(1)]**

C.9 Performance Testing [326 IAC 3-6]

**Compliance Requirements [326 IAC 2-1.1-11]**

C.10 Compliance Requirements [326 IAC 2-1.1-11]

**Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]**

C.11 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

C.12 Maintenance of Opacity Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]

C.13 Maintenance of Continuous Emission Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]

C.14 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]

C.15 Pressure Gauge and Other Instrument Specifications [326 IAC 2-1.1-11]  
[326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

**Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]**

C.16 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

C.17 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68]

C.18 Compliance Response Plan - Preparation, Implementation, Records, and Reports  
[326 IAC 2-7-5] [326 IAC 2-7-6]

C.19 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5]  
[326 IAC 2-7-6]

**Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

C.20 Emission Statement [326 IAC 2-7-5(3)(C)(iii)] [326 IAC 2-7-5(7)] [326 IAC 2-7-19(c)]  
[326 IAC 2-6]

C.21 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6]

C.22 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11]

C.23 NESHAP Notification Requirements [40 CFR 63]

**Stratospheric Ozone Protection**

C.24 Compliance with 40 CFR 82 and 326 IAC 22-1

**D.1 FACILITY OPERATION CONDITIONS - Quarry Activities, Stockpile Operations, Raw  
Material Sizing, and CKD Operations**

**Emission Limitations and Standards [326 IAC 2-7-5(1)]**

D.1.1 Particulate Emissions [326 IAC 6-3-2]

D.1.2 Determinations of Nonapplicability [40 CFR 60, Subparts A and F] [40 CFR 63, Subparts A  
and LLL]

D.1.3 Prevention of Significant Deterioration (PSD) [326 IAC 2-2]

D.1.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

**Compliance Determination Requirements**

D.1.5 Particulate Control

D.1.6 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

**Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

D.1.7 Visible Emissions Notations

D.1.8 Parametric Monitoring

D.1.9 Baghouse Inspections

D.1.10 Broken or Failed Bag Detection

**Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

**D.1.11 Record Keeping Requirements**

**D.2 FACILITY OPERATION CONDITIONS -**

**Clay processing operations, Crane storage facilities, Raw Mill facilities, Unloading station facilities, Fossil fuel facilities, Clinker handling facilities, Finish mill facilities, Silo storage facilities and transfer operations, Finish product loadout, Finish product masonry packing and portland packing**

**Emission Limitations and Standards [326 IAC 2-7-5(1)]**

- D.2.1 Particulate Emissions [326 IAC 6-3-2]
- D.2.2 General Provisions Relating to NESHAP [326 IAC 20-1][40 CFR Part 63, Subpart A]
- D.2.3 NESHAP Emissions Limitation [40 CFR 63, Subpart LLL]
- D.2.4 Determinations of Nonapplicability [40 CFR 60, Subparts A and F]
- D.2.5 General Provisions Relating to NSPS [326 IAC 12-1] [40 CFR Part 60, Subpart A]
- D.2.6 NSPS for Coal Preparation Plants [40 CFR 60, Subpart Y]
- D.2.7 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

**Compliance Determination Requirements**

- D.2.8 Testing Requirements [326 IAC 2-7-6(1),(6)]
- D.2.9 Particulate Control
- D.2.10 NESHAP Monitoring Requirements [40 CFR 63, Subpart LLL]

**Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

- D.2.11 Visible Emissions Notations
- D.2.12 Parametric Monitoring
- D.2.13 Baghouse Inspections
- D.2.14 Broken or Failed Bag Detection

**Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

- D.2.15 Record Keeping Requirements
- D.2.16 Reporting Requirements

**D.3 FACILITY OPERATION CONDITIONS - Kilns**

**Emission Limitations and Standards [326 IAC 2-7-5(1)]**

- D.3.1 Particulate Emissions [326 IAC 6-3-2]
- D.3.2 Sulfur Dioxide (SO<sub>2</sub>) [326 IAC 7-1.1-1]
- D.3.3 General Provisions Relating to NESHAP [326 IAC 20-1][40 CFR Part 63, Subpart A]
- D.3.4 NESHAP Emission Limitations [40 CFR 63, Subpart EEE]
- D.3.5 Alternate Emission Limitations [40 CFR 63, Subpart EEE]
- D.3.6 Determinations of Nonapplicability [40 CFR 60, Subparts A and F]
- D.3.7 NESHAP for Benzene Waste Operations [40 CFR 61, Subpart FF]
- D.3.8 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

**Compliance Determination Requirements**

- D.3.9 Testing Requirements [40 CFR 63, Subpart EEE] [326 IAC 2-7-6(1),(6)]  
[326 IAC 2-1-3(i)(8)] [326 IAC 2-1.1-11]

- D.3.10 Particulate Matter (PM)
- D.3.11 Sulfur Dioxide Emissions and Sulfur Content
- D.3.12 Continuous Emissions Monitoring [326 IAC 3-5] [40 CFR 63, Subpart EEE]  
[326 IAC 2-7-6(1),(6)]
- D.3.13 NESHAP Monitoring Requirements [40 CFR 63, Subpart EEE]

**Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

- D.3.14 ESP Parametric Monitoring and Inspections
- D.3.15 Visible Emissions Notations

**Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

- D.3.16 Record Keeping Requirements
- D.3.17 Reporting Requirements

**D.4 FACILITY OPERATION CONDITIONS - Clinker Coolers**

**Emission Limitations and Standards [326 IAC 2-7-5(1)]**

- D.4.1 General Provisions Relating to NESHAP [326 IAC 20-1][40 CFR Part 63, Subpart A]
- D.4.2 NESHAP Emissions Limitation [40 CFR 63, Subpart LLL]
- D.4.3 Determination of Nonapplicability [40 CFR 60, Subparts A and F]
- D.4.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

**Compliance Determination Requirements**

- D.4.5 Cyclical Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1-3(i)(8)]
- D.4.6 NESHAP Testing Requirements [40 CFR 63, Subpart LLL]
- D.4.7 Continuous Emissions Monitoring [326 IAC 3-5] [40 CFR 60, Subpart F]
- D.4.8 Particulate Matter (PM)
- D.4.9 NESHAP Monitoring Requirements [40 CFR 63, Subpart LLL]

**Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

- D.4.10 Parametric Monitoring
- D.4.11 Baghouse Inspections
- D.4.12 Broken or Failed Bag Detection
- D.4.13 Visible Emission Notations

**Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

- D.4.14 Record Keeping Requirements
- D.4.15 Reporting Requirements

**D.5 FACILITY OPERATION CONDITIONS - Degreasing Operations**

**Emission Limitations and Standards [326 IAC 2-7-5(1)]**

- D.5.1 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]
- D.5.2 Volatile Organic Compounds (VOC) [326 IAC 8-3-5]
- D.5.3 Determination of Nonapplicability [40 CFR 60.460 Subpart T] [40 CFR 60 Subparts A and F] [40 CFR 63 Subparts A and LLL]

**D.6 FACILITY OPERATION CONDITIONS - Hazardous Waste Storage Facilities**

**Emission Limitations and Standards [326 IAC 2-7-5(1)]**

- D.6.1 General Provisions Relating to NESHAP [326 IAC 20-1] [40 CFR 63, Subpart A]
- D.6.2 General Provisions Relating to NESHAP [326 IAC 20-1] [40 CFR 61, Subpart A]
- D.6.3 Off-site Waste and Recovery Operations NESHAP [326 IAC 20-23-1] [40 CFR 63, Subpart

DD]

- D.6.4 NESHAP (Fugitive Emission Sources) [326 IAC 14-8-1] [40 CFR 61, Subpart V]
- D.6.5 Monitoring Procedures for Equipment Leaks [326 IAC 2-7-6(1)] [40 CFR 61, Subpart V] [40 CFR 63, Subpart DD]
- D.6.6 NESHAP for Benzene Waste Operations [40 CFR 61, Subpart FF]
- D.6.7 Standards: Closed-vent Systems and Activated Carbon Canister System [40 CFR 61, Subpart FF] [40 CFR 61.349]
- D.6.8 Monitoring Procedures for Tanks [326 IAC 2-7-6(1)] [40 CFR 61, Subpart FF]
- D.6.9 Monitoring Procedures for Containers [326 IAC 2-7-6(1)] [40 CFR 61, Subpart FF]
- D.6.10 Monitoring Procedures for Activated Carbon Canister System and Closed-Vent System [326 IAC 2-7-6(1)] [40 CFR 61, Subpart FF]
- D.6.11 Startup, Shutdown, and Malfunction Plan [40 CFR 63.6(e)(3) General Provisions]

#### **Compliance Determination Requirements**

- D.6.12 Leak Detection Testing Requirements [326 IAC 2-7-6(1)] [40 CFR 61, Subpart FF]
- D.6.13 Activated Carbon Canister System Compliance Determination Requirements [326 IAC 2-7-6(1)] [40 CFR 61, Subpart FF]

#### **Record Keeping and Reporting Requirements**

- D.6.14 General Record Keeping Requirements [40 CFR 63, Subpart A] [40 CFR 63, Subpart DD] [40 CFR 61, Subpart FF]
- D.6.15 Record Keeping Requirements for Equipment Leaks [40 CFR 63, Subpart DD] [40 CFR 61, Subpart V]
- D.6.16 Record Keeping Requirements for Tanks and Containers [40 CFR 61, Subpart FF]
- D.6.17 Record Keeping Requirements for Activated Carbon Canister System and Closed-Vent System [40 CFR 61, Subpart FF]
- D.6.18 Reporting Requirements [40 CFR 63, Subpart A] [40 CFR 63, Subpart DD] [40 CFR 61, Subpart V]
- D.6.19 Reporting Requirements [40 CFR 61, Subpart FF]

#### **Certification**

#### **Emergency Occurrence Report**

#### **Quarterly Reports**

#### **Quarterly Deviation and Compliance Monitoring Report**



## SECTION A

## SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.3 and the description boxes in Sections D is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

### A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)] [326 IAC 2-7-1(22)]

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The Permittee owns and operates a portland cement manufacturing plant.

Responsible Official:	Plant Manager
Source Address:	State Road 25 South, 3084 West County Road 225 South, Logansport, Indiana 46947
Mailing Address:	State Road 25 South, 3084 West County Road 225 South, Logansport, Indiana 46947
General Source Phone Number:	219 753-5121
SIC Code:	3241
County Location:	Cass
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Permit Program Major Source, under PSD Rules Major Source, Section 112 of the Clean Air Act 1 of 28 listed source categories

### A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

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This stationary source consists of the following emission units and pollution control devices:

#### Quarry Activities

- (1) Drilling and blasting, identified as EU101 and EU102 respectively, commenced operation in 1961, with associated fugitive particulate matter (PM) emissions.

#### Raw Material / Clinker Stockpile Operations

- (2) One (1) limestone stockpile, identified as EU103, created in 1961.
- (3) Two (2) reclaimed clay stockpiles, identified as EU104 and EU105, created in 1961.
- (4) Two (2) wet flyash stockpiles, identified as EU106 and EU107, created in 1967.
- (5) Carhoe Missouri clay unloading, identified as EU108, created in 1962.
- (6) Truck to quarry loading, identified as EU109, commenced operation in 1961.
- (7) One (1) Mo. clay stockpile, identified as EU110, created in 1962.

- (8) One (1) alternate materials stockpile, identified as EU111, created in 1967.
- (9) One (1) overburden clay stockpile, identified as EU128, created in 1962.
- (10) One (1) iron stockpile, identified as EU301, created in 1967.
- (11) Iron unloading, identified as EU302, commenced operation in 1967.
- (12) One (1) gypsum stockpile, identified as EU303, created in 1962.
- (13) Gypsum unloading, identified as EU304, created in 1962.
- (14) One (1) coal/coke stockpile, identified as EU305, created in 1962.
- (15) Coal/coke unloading, identified as EU306, commenced operation in 1962.
- (16) One (1) coal/coke crane storage stockpile, located outside, identified as EU312, created in 1962.
- (17) Coal/coke unloading, identified as EU313, commenced operation in 1962.
- (18) Outside clinker storage stockpiles, identified as EU512, created in 1962.
- (19) Special clinker stockpile, identified as EU513, created in 1962.
- (20) Clinker loading, identified as EU514, commenced operation in 1962.
- (21) Special clinker stockpile (crushed), identified as EU515, created in 1962.

#### **Raw Material Sizing Operations**

- (22) Raw material loading, identified as EU112, commenced operation in 1962.
- (23) Quarry haul road, identified as EU113, created in 1961.
- (24) Raw material unloading, identified as EU114, commenced operation in 1962.
- (25) One (1) apron feeder transfer to primary crusher, identified as EU115, constructed in 1961, with a nominal throughput of 550 tons per hour.
- (26) One (1) primary crusher, identified as EU116, constructed in 1961, with a nominal capacity of 550 tons per hour, with PM emissions controlled by one (1) baghouse, identified as baghouse CE101, and exhausting to one (1) stack, identified as EP101.
- (27) One (1) clean-up screw, identified as EU117, constructed in 1961, with a nominal capacity of 15 tons per hour.

- (28) One (1) impact apron feeder, identified as EU118, constructed in 1961, with a nominal capacity of 550 tons per hour, with emissions controlled by a baghouse, identified as baghouse CE101, and exhausting to one (1) stack, identified as EP101.
- (29) Belt 1 covered conveyor, identified as EU119, constructed in 1962, with a nominal capacity of 550 tons per hour, with emissions controlled by two baghouses, identified as baghouse CE101 and baghouse CE102, and exhausting to two (2) stacks, identified as EP101 and EP102.
- (30) Screen transfers, identified as EU120, constructed in 1962, with a nominal capacity of 550 tons per hour.
- (31) Belt 2 covered conveyor, identified as EU121, constructed in 1962, with a nominal capacity of 300 tons per hour.
- (32) One (1) secondary crusher, identified as EU122, constructed in 1969, with a nominal capacity of 300 tons per hour, with PM emissions controlled by one (1) baghouse, identified as baghouse CE102, and exhausting to one (1) stack, identified as EP102
- (33) Belt 3 covered conveyor, identified as EU201, constructed in 1962, with a nominal capacity of 550 tons per hour.

#### **Kiln #1 and kiln #2 Recycled CKD Operations**

- (34) #1 recycled dust elevator, identified as EU408, constructed in 1965, with emissions controlled by a baghouse, identified as baghouse 106 and CE402, and exhausting to one (1) stack identified as EP402.
- (35) One (1) recycled dust holding tank, identified as EU409, and constructed in 1965.
- (36) One (1) feeder screw and F-K pump, identified as EU410, constructed in 1965, with emissions controlled by a baghouse, identified as baghouse 106 and CE402, and exhausting to one (1) stack identified as EP402.
- (37) #1 recycled dust scoop system/insufflation system, identified as EU411, with emissions exhausting directly to the kilns. The #1 recycled dust scoop was constructed in 1995. The insufflation system was constructed in 1965.

#### **Kiln #1 and kiln #2 Waste CKD Operations**

- (38) five (5) discharge hopper screws, identified as EU402, constructed in 1965.
- (39) one (1) covered 16" cross screw, identified as EU403, constructed in 1965.
- (40) One (1) #1 waste dust elevator, identified as EU404, constructed in 1965.
- (41) One (1) 9" cross screw, identified as EU405, constructed in 1965.

### **Kiln #2 Recycled CKD Operations**

- (42) #2 recycled dust elevator, identified as EU417, constructed in 1965, with emissions controlled by a baghouse, identified as baghouse 106 and CE402, and exhausting to one (1) stack identified as EP402.
- (43) One (1) recycled dust holding tank, identified as EU418, constructed in 1965.
- (44) One (1) feeder screw and F-K pump, identified as EU419, constructed in 1965, with emissions controlled by a baghouse, identified as baghouse 106 and CE402, and exhausting to one (1) stack identified as EP402.
- (45) #2 recycled dust scoop system/insufflation system, identified as EU420, with emissions exhausting directly to the kilns. The #2 recycled dust scoop system was constructed in 1995. The insufflation system was constructed in 1965.

### **Kiln #2 Waste CKD Operations**

- (46) five (5) discharge hopper screws, identified as EU414, constructed in 1965.
- (47) 16" covered cross screws, identified as EU415, constructed in 1965.
- (48) #2 waste dust elevator, identified as EU416, constructed in 1965.

### **Waste CKD Disposal Operations**

- (49) One (1) waste dust tank, identified as EU406, constructed in 1962.
- (50) Truck unloading, identified as EU407, commenced operation in 1962.
- (51) One (1) cement kiln dust haul road system, identified as EU422, constructed in 1962.
- (52) One (1) cement kiln dust pile, identified as EU423, commenced operation in 1962.

### **Clay Processing Operations**

- (53) Clay unloading to hopper, identified as EU123, commenced operation in 1962, with a nominal capacity of 30 tons per hour.
- (54) One (1) wobbler feeder for transferring clay to the log washer system, identified as EU124, constructed in 1962, with a nominal capacity of 30 tons per hour.
- (55) One (1) log washer system, identified as EU125, constructed in 1962, with a nominal capacity of 30 tons per hour.
- (56) One (1) waste gravel pile, identified as EU126, created in 1962.

- (57) Loading waste gravel into trucks, identified as EU127, commenced operation in 1962.

### **Crane Storage Facilities**

- (58) Three (3) limestone storage bins, identified as EU202, constructed in 1962.
- (59) One (1) Missouri clay storage bin, identified as EU203, constructed in 1962.
- (60) One (1) iron storage bin, identified as EU204, constructed in 1962.
- (61) West flyash truck unloading utilizing pneumatic conveying, identified as EU210, including tank 9, commenced operation in 1962, with a nominal storage capacity of 100 tons, tank 10 with a nominal storage capacity of 100 tons, tank 11 with a nominal storage capacity of 125 tons, and tank 12 with a nominal capacity of 125 tons, with emissions controlled by a baghouse, identified as baghouse 138 and CE202, and exhausting to one (1) stack identified as EP202.
- (62) One (1) inside west flyash holding tank, identified as EU211, with a nominal storage capacity of 130 tons, constructed in 1962, with emissions controlled by a baghouse, identified as baghouse 104 and CE203, and exhausting to one (1) stack identified as EP203.
- (63) East flyash truck unloading utilizing pneumatic conveying, identified as EU213, commenced operation in 1962, with emissions controlled by a baghouse, identified as baghouse 103 and CE204, and exhausting to one (1) stack identified as EP204.
- (64) One (1) east flyash storage bin, identified as EU214, constructed in 1962.
- (65) One (1) spare storage bin, identified as EU314, constructed in 1962.
- (66) One (1) coal/coke storage bin, identified as EU315, constructed in 1962.
- (67) Two (2) gypsum storage bins, identified as EU316, constructed in 1962.
- (68) Clinker bin 1 finish mill #1, identified as EU505, constructed in 1962.
- (69) Stone/clinker bin 2 finish mill #1, identified as EU506, constructed in 1962.
- (70) Clinker bin 3 finish mill #1, identified as EU507, constructed in 1962.
- (71) Crane unloading, identified as EU510, commenced operation in 1962.
- (72) Clinker bin 1 #2 finish mill, identified as EU520, constructed in 1962.
- (73) Clinker bin 2 #2 finish mill, identified as EU521, constructed in 1962.
- (74) Bin 1 clinker spill pile, identified as EU522, constructed in 1962.

### **Raw Mill Facilities**

- (75) Three belt feeders, identified as EU205, constructed in 1962, with a nominal capacity of 45 tons per hour.
- (76) One (1) Missouri clay belt feeder, identified as EU206, constructed in 1962, with a nominal capacity of 45 tons per hour.
- (77) One (1) iron feeder, identified as EU207, constructed in 1962, with a nominal capacity of 45 tons per hour.
- (78) One (1) covered cross belt, identified as EU208, constructed in 1962, with a nominal capacity of 45 tons per hour.
- (79) One (1) covered raw mill feed belt, identified as EU209, constructed in 1962, with a nominal capacity of 175 tons per hour, with emissions controlled by a baghouse, identified as baghouse 105 and CE201, and exhausting to one (1) stack identified as EP201.
- (80) Transfer screw to raw mill, identified as EU212, constructed in 1962, with a nominal capacity of 15 tons per hour.
- (81) One (1) east short covered screw, identified as EU215, constructed in 1962, with a nominal capacity of 15 tons per hour.
- (82) One (1) E-W long covered screw, identified as EU216, constructed in 1962, with a nominal capacity of 15 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as baghouse 105 and CE405, and exhausting to one (1) stack, identified as EP405.

### **Unloading Station Facilities**

- (83) Railroad unloading, identified as EU307, commenced operation in 1962.
- (84) One (1) unloading station hopper, identified as EU308, constructed in 1962.
- (85) One (1) belt feeder, identified as EU309, constructed in 1962.
- (86) Belt 7 covered conveyor, identified as EU310, constructed in 1962.
- (87) Conveyor transfer to outside storage, identified as EU311, constructed in 1962.

### **Fossil Fuel Facilities**

- (88) One (1) spare belt feeder to belt 8, identified as EU317, constructed in 1962.
- (89) One (1) coal/coke belt feeder to belt 8, identified as EU318, constructed in 1962.
- (90) Belt 8 to coal/coke tanks, identified as EU319, constructed in 1962.

- (91) One (1) coal/coke tank #1, identified as EU320, constructed in 1962.
- (92) Belt feed to coal mill #1, identified as EU321, constructed in 1962.
- (93) Coal/Coke cross belt, identified as EU322, constructed in 1962.
- (94) One (1) coal/coke tank #2, identified as EU323, constructed in 1962.
- (95) Belt feed to coal mill #2, identified as EU324, constructed in 1962.

#### **Kiln #1 and kiln #2 Clinker Handling Facilities**

- (96) One (1) #1 clinker drag conveyor, identified as EU501, constructed in 1962, with emissions controlled by a baghouse, identified as baghouse 109 and CE501, and exhausting to one (1) stack identified as EP501.
- (97) #1 CCDC screws, identified as EU502, constructed in 1962.
- (98) #1 clinker elevator, identified as EU503, constructed in 1962, with emissions controlled by a baghouse, identified as baghouse 109 and CE501, and exhausting to one (1) stack identified as EP501.
- (99) Clinker conveyor transfer system, identified as EU504, constructed in 1962 and modified in 1975, with emissions controlled by a baghouse, identified as baghouse 110 and CE502, and exhausting to one (1) stack identified as EP502.

#### **Kiln #2 Clinker Handling Facilities**

- (100) #2 clinker drag conveyor, identified as EU516, constructed in 1964, with emissions controlled by two (2) baghouses, identified as baghouse 112 and CE503 and baghouse 113 and CE504, and exhausting to two (2) stacks identified as EP503 and EP504 respectively.
- (101) #2 CCDC screw conveyor, identified as EU517 constructed in 1964,.
- (102) #2 clinker elevator, identified as EU518, constructed in 1964, with emissions controlled by two baghouses, identified as baghouse 112 and CE503 and as baghouse 113 and CE504, and exhausting to two (2) stacks identified as EP503 and EP504 respectively.
- (103) Clinker conveyor transfer system circuit, identified as EU519, constructed in 1964, with emissions controlled by a baghouse, identified as baghouse 113 and CE504, and exhausting to one (1) stack identified as EP504.

#### **Finish Mill #1 Facilities**

- (104) Clinker bin #1 feeder, identified as EU508, constructed in 1962.

- (105) Stone/clinker bin 2 feeder, identified as EU509, constructed in 1962.
- (106) One (1) gypsum feed belt, identified as EU511, constructed in 1962.
- (107) One (1) finish mill #1 feed belt, identified as EU601, constructed in 1962, with a nominal capacity of 45.0 tons per hour, with PM emissions controlled by one (1) baghouse, identified as baghouse 114 and CE601, and exhausting to one (1) stack, identified as EP601.
- (108) one (1) finish mill #1 circuit, identified as EU602, constructed in 1962, with emissions controlled by a baghouse, identified as baghouse 116 and CE602, and exhausting to one (1) stack identified as EP602.
- (109) One (1) separator, cooler #1 and transfer, identified as EU603, constructed in 1962, with emissions controlled by a baghouse, identified as baghouse 115 and CE603, and exhausting to one (1) stack identified as EP603.

#### **Finish Mill #2 Facilities**

- (110) Clinker bin 1 feeder, identified as EU523, constructed in 1964.
- (111) Clinker bin 2 feeder, identified as EU524, constructed in 1964.
- (112) FM #2 gypsum feeder, identified as EU525, constructed in 1964.
- (113) One (1) finish mill #2 feed belt, identified as EU604, constructed in 1964, with a nominal capacity of 45.0 tons per hour, with PM emissions controlled by two (2) baghouses, identified as baghouses 117a (CE604a) and 117b (CE604b) respectively, and exhausting to one (1) stack, identified as EP604.
- (114) One (1) finish mill #2 circuit, identified as EU605, constructed in 1964, with emissions controlled by a baghouse, identified as baghouse 119 and CE605, and exhausting to one (1) stack identified as EP605.
- (115) One (1) separator, cooler #2 and transfer, identified as EU606, constructed in 1964, with emissions controlled by a baghouse, identified as baghouse 118 and CE606, and exhausting to one (1) stack identified as EP606.

#### **Finish Product Silo Storage Facilities**

- (116) Silos 11/12/13/14/15/16/17/18, identified as EU704, constructed in 1965, with emissions controlled by a baghouse, identified as baghouse 126 and CE704, and exhausting to one (1) stack identified as EP704.
- (117) Silos 1/ 2/3/4/5/6/7/8, identified as EU709, constructed in 1961, with emissions controlled by a baghouse, identified as baghouse 122 and CE709, and exhausting to one (1) stack identified as EP709.



- (118) Silos 9/10, identified as EU711, constructed in 1961, with emissions controlled by a baghouse, identified as baghouse 124 and CE711, and exhausting to one (1) stack identified as EP711.

#### **Finish Product Silo Transfer Operations**

- (119) Truck/Railroad car unloading and internal transfers to silos, identified as EU701 and EU702, commenced operation in 1962, with emissions controlled by two (2) baghouses, identified as baghouse 132 and CE701 and as baghouse 133 and CE702, and exhausting to two (2) stacks identified as EP701 and EP702 respectively.

#### **Finish Product Loadout Old Silos (West) Operation**

- (120) Bulk truck loadout, identified as EU712, constructed in 1962, with emissions controlled by a baghouse, identified as baghouse 129 and CE712, and exhausting to one (1) stack identified as EP712.
- (121) Bulk railroad loadout, identified as EU713, constructed in 1962, with emissions controlled by a baghouse, identified as baghouse 130 and CE713, and exhausting to one (1) stack identified as EP713.

#### **Finish Product Loadout New Silos (East) Operation**

- (122) Bulk truck loadout, identified as EU706, constructed in 1965, with emissions controlled by a baghouse, identified as baghouse 131 and CE706, and exhausting to one (1) stack identified as EP706.

#### **Finish Product Masonry Packing**

- (123) Transfer to masonry packer, identified as EU801, constructed in 1965, with emissions controlled by two (2) baghouses, identified as baghouse 128 and CE801 and as baghouse 139 and CE802, and exhausting to two (2) stacks identified as EP801 and EP802 respectively.
- (124) One (1) masonry packer, identified as EU802, constructed in 1965, with emissions controlled by a baghouse, identified as baghouse 128 and CE801, and exhausting to one (1) stack identified as EP801.
- (125) Transfer to pallets/storage (masonry), identified as EU803, constructed in 1965.

#### **Finish Product Portland Packing**

- (126) Transfer to portland packer, identified as EU804, constructed in 1962, with emissions controlled by a baghouse, identified as baghouse 127 and CE803, and exhausting to one (1) stack identified as EP803.

- (127) One (1) portland packer, identified as EU805, constructed in 1962, with emissions controlled by a baghouse, identified as baghouse 127 and CE803, and exhausting to one (1) stack identified as EP803.
- (128) Transfer to pallets/storage (portland), identified as EU806, constructed in 1962.

#### **Kiln #1 and Kiln #2 Facilities**

- (129) One (1) wet process rotary cement kiln #1, identified as EU401, constructed in 1962, with a nominal heat input of 245 million Btu per hour, with a nominal production rate of 42.0 tons per hour (as clinker), with PM emissions controlled by one (1) electrostatic precipitator (ESP #1), identified as CE401, and exhausting to one (1) stack, identified as EP401. Raw material sources include clay, sand, limestone, and other sources of silica, alumina, iron, calcium, magnesium, and trace elements. As part of the semi-direct firing system, a pulverizing mill is used to grind the solid fuels that are used in the kiln. The pulverizing mill exhausts to the kiln.
- (130) One (1) wet process rotary cement kiln #2, identified as EU413, constructed in 1964, with a nominal heat input of 245 million Btu per hour, with a nominal production rate of 42.0 tons per hour (as clinker), with PM emissions controlled by one (1) electrostatic precipitator (ESP #1), identified as CE401, and exhausting to one (1) stack, identified as EP401. Raw material sources include clay, sand, limestone, and other sources of silica, alumina, iron, calcium, magnesium, and trace elements. As part of the semi-direct firing system, a pulverizing mill is used to grind the solid fuels that are used in the kiln. The pulverizing mill exhausts to the kiln.

#### **Clinker Cooler #1 Facilities**

- (131) One (1) clinker cooler #1, identified as EU412, constructed in 1962, with a nominal production rate of 42.0 tons per hour, with PM emissions controlled by one (1) baghouse, identified as baghouse 107 and CE404, and exhausting to one (1) stack, identified as EP404.

#### **Clinker Cooler #2 Facilities**

- (132) One (1) clinker cooler #2, identified as EU421, constructed in 1962, with a nominal production rate of 42.0 tons per hour, with PM emissions controlled by one (1) baghouse, identified as baghouse 111 and CE407, and exhausting to one (1) stack, identified as EP404.

#### **A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]**

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This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21):

- (1) degreasing operations;[326 IAC 8-3-2] [326 IAC 8-3-5]

- (2) waste fuel operations; [40 CFR 63, Subpart DD] [40 CFR 61, Subpart FF]

This stationary source also includes other insignificant activities as defined at 326 IAC 2-7-1(21) identified in the Technical Support Document for this permit that are not specifically regulated hereunder.

A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

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This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

- (a) It is a major source, as defined in 326 IAC 2-7-1(22); and
- (b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

## GENERAL CONDITIONS

## B.1 Definitions [326 IAC 2-7-1]

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-7) shall prevail.

B.2 Permit Term [326 IAC 2-7-5(2)] [326 IAC 2-1.1-9.5]

This permit is issued for a fixed term of five (5) years from the original date, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date.

### B.3 Enforceability [326 IAC 2-7-7]

Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

#### B.4 Termination of Right to Operate [326 IAC 2-7-10] [326 IAC 2-7-4(a)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-7-3 and 326 IAC 2-7-4(a).

B.5 Severability [326 IAC 2-7-5(5)]

The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

**B.6 Property Rights or Exclusive Privilege [326 IAC 2-7-5(6)(D)]**

This permit does not convey any property rights of any sort, or any exclusive privilege.

### B.7 Duty to Provide Information [326 IAC 2-7-5(6)(E)]

- (a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information authorized by law that IDEM, OAQ, may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34). Upon request, the Permittee shall also furnish to IDEM, OAQ, copies of records required to be kept by this permit, or for information claimed to be confidential, the Permittee may furnish such records directly to the U.S. EPA along with a claim of confidentiality. [326 IAC 2-7-5(6)(E)]
- (b) The Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

B.8 Certification [326 IAC 2-7-4(f)] [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)(C)]

- (a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by a responsible official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification.

- (c) A responsible official is defined at 326 IAC 2-7-1(34).

**B.9 Annual Compliance Certification [326 IAC 2-7-6(5)]**

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- (a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit. The initial certification shall cover the time period from the date of final permit issuance through December 31 of the same year. All subsequent certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in letter form no later than July 1 of each year to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

and

United States Environmental Protection Agency, Region V  
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590

- (b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (c) The annual compliance certification report shall include the following:
- (1) The identification of each term or condition of this permit that is the basis of the certification;
  - (2) The compliance status;
  - (3) Whether compliance was continuous or intermittent;
  - (4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-7-5(3); and
  - (5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ, may require to determine the compliance status of the source.

The submittal by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

**B.10 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)] [326 IAC 1-6-3]**

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- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) within ninety (90) days after issuance of this permit, including the following information on each facility:

- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
- (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
- (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

The PMP and the PMP extension notification do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) The Permittee shall implement the PMPs, including any required record keeping, as necessary to ensure that failure to implement a PMP does not cause or contribute to an exceedance of any limitation on emissions or potential to emit.
- (c) A copy of the PMP's shall be submitted to IDEM, OAQ, upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMP does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (d) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operations and Maintenance (O&M) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

**B.11 Emergency Provisions [326 IAC 2-7-16]**

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- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:
  - (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
  - (2) The permitted facility was at the time being properly operated;

- (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
- (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section), or  
Telephone Number: 317-233-5674 (ask for Compliance Section)  
Facsimile Number: 317-233-5967

- (5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile, to:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-7-5(3)(C)(ii) and must contain the following:

- (A) A description of the emergency;
- (B) Any steps taken to mitigate the emissions; and
- (C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
- (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
- (e) IDEM, OAQ, may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4-(c)(10) be revised in response to an emergency.
- (f) Failure to notify IDEM, OAQ, by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of

326 IAC 2-7 and any other applicable rules.

- (g) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.

**B.12 Permit Shield [326 IAC 2-7-15] [326 IAC 2-7-20] [326 IAC 2-7-12]**

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- (a) Pursuant to 326 IAC 2-7-15, the Permittee has been granted a permit shield. The permit shield provides that compliance with the conditions of this permit shall be deemed in compliance with any applicable requirements as of the date of permit issuance, provided that either the applicable requirements are included and specifically identified in this permit or the permit contains an explicit determination or concise summary of a determination that other specifically identified requirements are not applicable. The Indiana statutes from IC 13 and rules from 326 IAC, referenced in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a Part 70 permit under 326 IAC 2-7 or for applicable requirements for which a permit shield has been granted.

This permit shield does not extend to applicable requirements which are promulgated after the date of issuance of this permit unless this permit has been modified to reflect such new requirements.

- (b) In addition to the nonapplicability determinations set forth in Section D of this permit, the IDEM, OAQ has made the following determinations regarding this source:
  - (1) None of the petroleum storage tanks listed in Section A.3 of this permit are subject to the requirements of the New Source Performance Standard (NSPS) 40 CFR 60.110 (Subpart K), or 40 CFR 60.110a (Subpart Ka) because all the petroleum storage tanks have capacities less than 40,000 gallons.
  - (2) None of the storage tanks listed in Section A.3 of this permit are subject to the NSPS 326 IAC 12, 40 CFR 60.110b (Subpart Kb) because the tanks have capacities less than 10,500 gallons, or do not contain a substance categorized as volatile organic liquid (VOL).
  - (3) The quarry activities and the raw material sizing facilities listed in this permit are not subject to the requirements of the NSPS 326 IAC 12, 40 CFR 60.670 (Subpart OOO) because they were constructed prior to the applicability date of August 31, 1983.
  - (4) None of the other facilities listed in this permit are subject to the requirements of the NSPS 326 IAC 12, 40 CFR 60.670 (Subpart OOO) because this rule specifically exempts facilities that are subject to the requirements of the NSPS, 40 CFR 60.60 (Subpart F), and facilities which follow in the plant process any facility which is subject to the requirements of the NSPS, 40 CFR 60.60 (Subpart F).
  - (5) None of the facilities listed in this permit are subject to the requirements of the NSPS 326 IAC 12, 40 CFR 60.730 (Subpart UUU) because the source does not fit the definition of a mineral processing plant.



- (c) If, after issuance of this permit, it is determined that the permit is in nonconformance with an applicable requirement that applied to the source on the date of permit issuance, IDEM, OAQ, shall immediately take steps to reopen and revise this permit and issue a compliance order to the Permittee to ensure expeditious compliance with the applicable requirement until the permit is reissued. The permit shield shall continue in effect so long as the Permittee is in compliance with the compliance order.
- (d) No permit shield shall apply to any permit term or condition that is determined after issuance of this permit to have been based on erroneous information supplied in the permit application. Erroneous information means information that the Permittee knew to be false, or in the exercise of reasonable care should have been known to be false, at the time the information was submitted.
- (e) Nothing in 326 IAC 2-7-15 or in this permit shall alter or affect the following:
  - (1) The provisions of Section 303 of the Clean Air Act (emergency orders), including the authority of the U.S. EPA under Section 303 of the Clean Air Act;
  - (2) The liability of the Permittee for any violation of applicable requirements prior to or at the time of this permit's issuance;
  - (3) The applicable requirements of the acid rain program, consistent with Section 408(a) of the Clean Air Act; and
  - (4) The ability of U.S. EPA to obtain information from the Permittee under Section 114 of the Clean Air Act.
- (f) This permit shield is not applicable to any change made under 326 IAC 2-7-20(b)(2) (Sections 502(b)(10) of the Clean Air Act changes) and 326 IAC 2-7-20(c)(2) (trading based on State Implementation Plan (SIP) provisions).
- (g) This permit shield is not applicable to modifications eligible for group processing until after IDEM, OAQ, has issued the modifications. [326 IAC 2-7-12(c)(7)]
- (h) This permit shield is not applicable to minor Part 70 permit modifications until after IDEM, OAQ, has issued the modification. [326 IAC 2-7-12(b)(7)]

**B.13 Prior Permit Conditions Superseded [326 IAC 2-1.1-9.5]**

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- (a) All terms and conditions of previous permits issued pursuant to permitting programs approved into the state implementation plan have been either
  - (1) incorporated as originally stated,
  - (2) revised, or
  - (3) deletedby this permit.
- (b) All previous registrations and permits are superseded by this permit.

**B.14 Deviations from Permit Requirements and Conditions [326 IAC 2-7-5(3)(C)(ii)]**

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- (a) Deviations from any permit requirements (for emergencies see Section B - Emergency Provisions), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

Using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. A deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report.

The Quarterly Deviation and Compliance Monitoring Report does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.
- (c) Emergencies shall be included in the Quarterly Deviation and Compliance Monitoring Report.

**B.15 Permit Modification, Reopening, Revocation and Reissuance, or Termination  
[326 IAC 2-7-5(6)(C)] [326 IAC 2-7-8(a)] [326 IAC 2-7-9]**

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- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-7-5(6)(C)] The notification by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ, determines any of the following:
- (1) That this permit contains a material mistake.
  - (2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.
  - (3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-7-9(a)(3)]
- (c) Proceedings by IDEM, OAQ, to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-7-9(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-7-9(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ, at least thirty (30)

days in advance of the date this permit is to be reopened, except that IDEM, OAQ, may provide a shorter time period in the case of an emergency. [326 IAC 2-7-9(c)]

**B.16 Permit Renewal [326 IAC 2-7-4]**

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- (a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ, and shall include the information specified in 326 IAC 2-7-4. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

- (b) Timely Submittal of Permit Renewal [326 IAC 2-7-4(a)(1)(D)]

- (1) A timely renewal application is one that is:

- (A) Submitted at least nine (9) months prior to the date of the expiration of this permit; and
- (B) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

- (2) If IDEM, OAQ, upon receiving a timely and complete permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, including any permit shield provided in 326 IAC 2-7-15, until the renewal permit has been issued or denied.

- (c) Right to Operate After Application for Renewal [326 IAC 2-7-3]  
If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-7 until IDEM, OAQ, takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ, any additional information identified as being needed to process the application.

- (d) United States Environmental Protection Agency Authority [326 IAC 2-7-8(e)]  
If IDEM, OAQ, fails to act in a timely way on a Part 70 permit renewal, the U.S. EPA may invoke its authority under Section 505(e) of the Clean Air Act to terminate or revoke and reissue a Part 70 permit.

**B.17 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]**

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- (a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:  
  
Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015  
  
Any such application shall be certified by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]
- (d) No permit amendment or modification is required for the addition, operation, or removal of a nonroad engine, as defined in 40 CFR 89.2.

**B.18 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)] [326 IAC 2-7-12 (b)(2)]**

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- (a) No Part 70 permit revision shall be required under any approved economic incentives, marketable Part 70 permits, emissions trading, and other similar programs or processes for changes that are provided for in a Part 70 permit.
- (b) Notwithstanding 326 IAC 2-7-12(b)(1)(D)(i) and 326 IAC 2-7-12(c)(1), minor Part 70 permit modification procedures may be used for Part 70 modifications involving the use of economic incentives, marketable Part 70 permits, emissions trading, and other similar approaches to the extent that such minor Part 70 permit modification procedures are explicitly provided for in the applicable State Implementation Plan (SIP) or in applicable requirements promulgated or approved by the U.S. EPA.

**B.19 Operational Flexibility [326 IAC 2-7-20] [326 IAC 2-7-10.5]**

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- (a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b), (c), or (e), without a prior permit revision, if each of the following conditions is met:
  - (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
  - (2) Any preconstruction approval required by 326 IAC 2-7-10.5 has been obtained;
  - (3) The changes do not result in emissions which exceed the emissions allowable under this permit (whether expressed herein as a rate of emissions or in terms of total emissions);
  - (4) The Permittee notifies the:

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

and

United States Environmental Protection Agency, Region V  
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and

- (5) The Permittee maintains records on-site which document, on a rolling five (5) year basis, all such changes and emissions trading that are subject to 326 IAC 2-7-20(b), (c), or (e) and makes such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ, in the notices specified in 326 IAC 2-7-20(b), (c)(1), and (e)(2).

- (b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of 326 IAC 2-7-20(a). For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:

- (1) A brief description of the change within the source;
- (2) The date on which the change will occur;
- (3) Any change in emissions; and
- (4) Any permit term or condition that is no longer applicable as a result of the change.

The notification which shall be submitted is not considered an application form, report, or compliance certification. Therefore the notification by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (c) Emission Trades [326 IAC 2-7-20(c)]  
The Permittee may trade increases and decreases in emissions in the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-7-20(c).
- (d) Alternative Operating Scenarios [326 IAC 2-7-20(d)]  
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-7-5(9). No prior notification of IDEM, OAQ, or U.S. EPA is required.

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A modification, construction, or reconstruction is governed by 326 IAC 2 and 326 IAC 2-7-10.5.

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**B.21 Inspection and Entry** [326 IAC 2-7-6] [IC 13-14-2-2] [IC 13-30-3-1] [IC 13-30-3-2]

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Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a Part 70 source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy, any records that must be kept under the conditions of this permit;
- (c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, Sample or monitor, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

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**B.22 Transfer of Ownership or Operational Control** [326 IAC 2-7-11]

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- (a) The Permittee must comply with the requirements of 326 IAC 2-7-11 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.
- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

The application which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

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**B.23 Annual Fee Payment** [326 IAC 2-7-19] [326 IAC 2-7-5(7)] [326 IAC 2-1.1-7]

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- (a) The Permittee shall pay annual fees to IDEM, OAQ, within thirty (30) calendar days of

receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ, the applicable fee is due April 1 of each year.

- (b) Except as provided in 326 IAC 2-7-19(e), failure to pay may result in administrative enforcement action or revocation of this permit.
- (c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-0425 (ask for OAQ, Technical Support and Modeling Section), to determine the appropriate permit fee.

## SECTION C SOURCE OPERATION CONDITIONS

Entire Source
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### Emission Limitations and Standards [326 IAC 2-7-5(1)]

C.1 Particulate Matter Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) pounds per hour [40 CFR 52 Subpart P] [326 IAC 6-3-2]

- (a) Pursuant to 40 CFR 52 Subpart P, particulate matter emissions from any process not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than 100 pounds per hour shall not exceed 0.551 pounds per hour.
- (b) Pursuant to 326 IAC 6-3-2(e)(2), the particulate emissions from any process not already exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour. This condition is not federally enforceable.

C.2 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.3 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1. 326 IAC 4-1-3 (a)(2)(A) and (B) are not federally enforceable.

C.4 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and 326 IAC 9-1-2. 326 IAC 9-1-2 is not federally enforceable.

C.5 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

C.6 Operation of Equipment [326 IAC 2-7-6(6)]

Except as otherwise provided by statute, rule, or in this permit, all air pollution control equipment listed in this permit and used to comply with an applicable requirement shall be operated at all times that the emission units vented to the control equipment are in operation.



**C.7 Stack Height [326 IAC 1-7]**

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The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted. The provisions of 326 IAC 1-7-2, 326 IAC 1-7-3(c) and (d), 326 IAC 1-7-4(a)(3), (e), and (f), and 326 IAC 1-7-5(d) are not federally enforceable.

**C.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61 Subpart M]**

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The Permittee shall comply with the applicable requirements of 326 IAC 14-10, 326 IAC 18, and 40 CFR 61.140 when conducting any asbestos abatement project covered by those rules.

**Testing Requirements [326 IAC 2-7-6(1)]**

**C.9 Performance Testing [326 IAC 3-6]**

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- (a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

not later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ, if the source submits to IDEM, OAQ, a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

**Compliance Requirements [326 IAC 2-1.1-11]**

**C.10 Compliance Requirements [326 IAC 2-1.1-11]**

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The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA. The Permittee shall have the right to seek administrative or judicial review of an order to test.

**Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]**

**C.11 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]**

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Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days after permit issuance. If required by Section D, the Permittee shall be responsible for installing any necessary equipment

and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.

The notification which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units or emission units added through a source modification shall be implemented when operation begins.

**C.12 Maintenance of Continuous Opacity Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]**

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- (a) The Permittee shall install, calibrate, maintain, and operate all necessary continuous opacity monitoring systems (COMS) and related equipment.
- (b) All continuous opacity monitoring systems shall meet the performance specifications of 40 CFR 60, Appendix B, Performance Specification No. 1, and are subject to monitor system certification requirements pursuant to 326 IAC 3-5.
- (c) In the event that a breakdown of a continuous opacity monitoring system occurs, a record shall be made of the time and reason of the breakdown and efforts made to correct the problem.

**C.13 Maintenance of Continuous Emission Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]**

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- (a) The Permittee shall install, calibrate, maintain, and operate all necessary continuous emission monitoring systems (CEMS) and related equipment.
- (b) All continuous emission monitoring systems shall meet all applicable performance specifications of 40 CFR 60 or any other performance specification, and are subject to monitor system certification requirements pursuant to 326 IAC 3-5-3.
- (c) In the event that a breakdown of a continuous emission monitoring system occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem.
- (d) Whenever a continuous emission monitor other than an opacity monitor is malfunctioning or is down for maintenance or repairs, the following shall be used as an alternative to continuous data collection:
  - (1) If the CEM is required for monitoring NO<sub>x</sub> or SO<sub>2</sub> emissions pursuant to 40 CFR 75 (Title IV Acid Rain program) or 326 IAC 10-4 (NO<sub>x</sub> Budget Trading Program), the Permittee shall comply with the relevant requirements of 40 CFR 75 Subpart D - Missing Data Substitution Procedures.

- (2) If the CEM is not used to monitor NO<sub>x</sub> or SO<sub>2</sub> emissions pursuant to 40 CFR 75 or 326 IAC 10-4, then supplemental or intermittent monitoring of the parameter shall be implemented as specified in Section D of this permit until such time as the emission monitor system is back in operation.
- (e) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous emission monitoring system pursuant to 40 CFR 63, Subpart EEE.

**C.14 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]**

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Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60 Appendix B, 40 CFR 63, or other approved methods as specified in this permit.

**C.15 Pressure Gauge and Other Instrument Specifications**

---

- (a) Whenever a condition in this permit requires the measurement of pressure drop, voltage, current, or temperature across any part of the unit or its control device, the gauge or instrument employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent ( ±2%) of full scale reading.
- (b) The Permittee may request the IDEM, OAQ approve the use of a pressure gauge or other instrument that does not meet the above specifications provided the Permittee can demonstrate an alternative pressure gauge or other instrument specification will adequately ensure compliance with permit conditions requiring the measurement of pressure drop or other parameters.

**Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]**

**C.16 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]**

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Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

- (a) The Permittee prepared and submitted written emergency reduction plans (ERPs) consistent with safe operating procedures on February 26, 1980.
- (b) If the ERP is disapproved by IDEM, OAQ, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP.
- (c) Upon direct notification by IDEM, OAQ, that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level.  
[326 IAC 1-5-3]

**C.17 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68]**

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If a regulated substance, as defined in 40 CFR 68, is present at a source in more than a threshold quantity, the source must comply with the applicable requirements of 40 CFR 68.

**C.18 Compliance Response Plan - Preparation, Implementation, Records, and Reports  
[326 IAC 2-7-5] [326 IAC 2-7-6]**

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- (a) The Permittee is required to prepare a Compliance Response Plan (CRP), for each compliance monitoring condition of this permit. If a Permittee is required to have an Operations and Maintenance (O&M) Plan under 40 CFR 63, such plans shall be deemed to satisfy the requirements of a CRP for those compliance monitoring conditions. A CRP

shall be submitted to IDEM, OAQ upon request. The CRP may consist of information contained within the Preventive Maintenance Plan(s) described in Section B - Preventive Maintenance Plan, of this permit. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee, supplemented from time to time by the Permittee, maintained on site, and comprised of:

- (1) Reasonable response steps that may be implemented in the event that a response step is needed pursuant to the requirements of Section D of this permit; and an expected time frame for taking reasonable response steps.
- (2) If, at any time, the Permittee takes reasonable response steps that are not set forth in the Permittee's current Compliance Response Plan or O&M Plan and the Permittee documents such response in accordance with subsection (e) below, the Permittee shall amend its Compliance Response Plan or O&M Plan to include such response steps taken.

The O&M Plan shall be submitted within the time frames specified by the applicable 40 CFR 63 requirement.

- (b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition as follows:
  - (1) Reasonable response steps shall be taken as set forth in the Permittee's current Compliance Response Plan or O&M Plan; or
  - (2) If none of the reasonable response steps listed in the Compliance Response Plan or O&M Plan is applicable or responsive to the excursion, the Permittee shall devise and implement additional response steps as expeditiously as practical. Taking such additional response steps shall not be considered a deviation from this permit so long as the Permittee documents such response steps in accordance with this condition.
  - (3) If the Permittee determines that additional response steps would necessitate that the emissions unit or control device be shut down, and it will be 10 days or more until the unit or device will be shut down, then the Permittee shall promptly notify the IDEM, OAQ of the expected date of the shut down, the status of the applicable compliance monitoring parameter with respect to normal, and the results of the actions taken up to the time of notification.
  - (4) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (c) The Permittee is not required to take any further response steps for any of the following reasons:
  - (1) A false reading occurs due to the malfunction of the monitoring equipment and prompt action was taken to correct the monitoring equipment.
  - (2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for a minor permit modification to the permit, and such

request has not been denied or;

- (3) An automatic measurement was taken when the process was not operating; or
  - (4) The process has already returned or is returning to operating within "normal" parameters and no response steps are required.
- (d) When implementing reasonable steps in response to a compliance monitoring condition, if the Permittee determines that an exceedance of an emission limitation has occurred, the Permittee shall report such deviations pursuant to Section B-Deviations from Permit Requirements and Conditions.
- (e) The Permittee shall record all instances when, in accordance with Section D, response steps are taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.
- (f) Except as otherwise provided by a rule or provided specifically in Section D, all monitoring as required in Section D shall be performed when the emission unit is operating, except for time necessary to perform quality assurance and maintenance activities.

**C.19 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5]  
[326 IAC 2-7-6]**

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- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

**Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

**C.20 Emission Statement [326 IAC 2-7-5(3)(C)(iii)] [326 IAC 2-7-5(7)] [326 IAC 2-7-19(c)]  
[326 IAC 2-6]**

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- (a) The Permittee shall submit an annual emission statement certified pursuant to the requirements of 326 IAC 2-6, that must be received by July 1 of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4. The annual emission statement shall meet the following requirements:
  - (1) Indicate estimated actual emissions of criteria pollutants from the source, in compliance with 326 IAC 2-6 (Emission Reporting);

- (2) Indicate estimated actual emissions of regulated pollutants as defined by 326 IAC 2-7-1 (32) ("Regulated pollutant which is used only for purposes of Section 19 of this rule") from the source, for purposes of Part 70 fee assessment.
- (b) The annual emission statement covers the twelve (12) consecutive month time period starting January 1 and ending December 31. The annual emission statement must be submitted to:

Indiana Department of Environmental Management  
Technical Support and Modeling Section, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

The emission statement does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (c) The annual emission statement required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

C.21 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6]

- (a) Records of all required monitoring data, reports, and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days after permit issuance.

C.22 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11]

- (a) The source shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified

mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

- (d) Unless otherwise specified in this permit, any quarterly report required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (e) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years.

**C.23 NESHAP Notification and Reporting Requirements [40 CFR Part 63, Subparts A, EEE, and LLL]**

The Permittee shall comply with all reporting provisions specified in 40 CFR Part 63, Subparts EEE and LLL, and in particular:

- (a) The Permittee shall submit an initial notification in accordance with 40 CFR 63.9(b) (Subpart A, General Provisions) immediately. In 40 CFR 63.9(b), the Permittee is required to provide the following information:
  - (1) The name and address of the Permittee;
  - (2) The address (i.e., physical location) of the affected source;
  - (3) An identification of the relevant standard, or other requirement, that is the basis of the notification and the source's compliance date;
  - (4) A brief description of the nature, size, design, and method of operation of the source, including its operating design capacity and an identification of each point of emission for each hazardous air pollutant, or if a definitive identification is not yet possible, a preliminary identification of each point of emission for each hazardous air pollutant; and
  - (5) A statement of whether the affected source is a major source or an area source.
- (b) The Permittee shall submit a notification of performance tests, as required by 40 CFR 63.7 and 40 CFR 63.9(e).
- (c) The Permittee shall submit a notification of opacity and visible emission observations required by 40 CFR 63.1349 in accordance with 40 CFR 63.6(h)(5) and 40 CFR 63.9(f).
- (d) The Permittee shall submit notification, as required by 40 CFR 63.9(g), of the date that continuous emission monitor performance evaluation required by 40 CFR 63.8(e) is scheduled to begin.
- (e) The Permittee shall submit notification of compliance status, as required by 40 CFR 63.9(h).
- (f) The notification(s) required in this section shall be submitted to:

Indiana Department of Environmental Management

Compliance Data Section, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

and

United States Environmental Protection Agency, Region V  
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590

### **Stratospheric Ozone Protection**

#### **C.24 Compliance with 40 CFR 82 and 326 IAC 22-1**

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Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with the standards for recycling and emissions reduction:

- (a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.
- (b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.
- (c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.



**SECTION D.1**

**FACILITY OPERATION CONDITIONS**

Facility Description [326 IAC 2-7-5(15)] Note: Complete Descriptions are shown in Section A.2.

**Quarrying and Raw Material/Clinker Stockpile Operations**

- (1) Drilling and blasting, identified as EU101 and EU102 respectively.
- (2) One (1) limestone stockpile, identified as EU103.
- (3) Two (2) reclaimed clay stockpiles, identified as EU104 and EU105.
- (4) Two (2) wet flyash stockpiles, identified as EU106 and EU107.
- (5) Carhoe Missouri clay unloading, identified as EU108.
- (6) Truck to quarry loading, identified as EU109.
- (7) One (1) Mo. clay stockpile, identified as EU110.
- (8) One (1) alternate materials stockpile, identified as EU111.
- (9) One (1) overburden clay stockpile, identified as EU128.
- (10) One (1) iron stockpile, identified as EU301.
- (11) Iron unloading, identified as EU302.
- (12) One (1) gypsum stockpile, identified as EU303.
- (13) Gypsum unloading, identified as EU304.
- (14) One (1) coal/coke stockpile, identified as EU305.
- (15) Coal/coke unloading, identified as EU306.
- (16) One (1) coal/coke crane storage stockpile, located outside, identified as EU312.
- (17) Coal/coke unloading, identified as EU313.
- (18) Outside clinker storage stockpile, identified as EU512.
- (19) Special clinker stockpile, identified as EU513.
- (20) Clinker loading, identified as EU514.
- (21) Special clinker stockpile (crushed), identified as EU515.

**Raw Material Sizing Operations**

- (22) Raw material loading, identified as EU112.
- (23) Quarry haul road, identified as EU113.
- (24) Raw material unloading, identified as EU114.
- (25) One (1) apron feeder transfer to primary crusher, identified as EU115.
- (26) One (1) primary crusher, identified as EU116.
- (27) One (1) clean-up screw, identified as EU117.
- (28) One (1) impact apron feeder, identified as EU118.
- (29) Belt 1 covered conveyor, identified as EU119.
- (30) Screen transfers, identified as EU120.
- (31) Belt 2 covered conveyor, identified as EU121.
- (32) One (1) secondary crusher, identified as EU122.
- (33) Belt 3 covered conveyor, identified as EU201.

**Kiln #1 Recycled CKD Operations**

- (34) #1 recycled dust elevator, identified as EU408.
- (35) One (1) recycled dust holding tank, identified as EU409.
- (36) One (1) feeder screw and F-K pump, identified as EU410.
- (37) #1 recycled dust scoop/insufflation system, identified as EU411.

**Kiln #1 Waste CKD Operations**

- (38) five (5) discharge hopper screws, identified as EU402.
- (39) one (1) covered 16" cross screw, identified as EU403.
- (40) One (1) #1 waste dust elevator, identified as EU404.
- (41) One (1) 9" cross screw, identified as EU405.

(The information describing the processes contained in this facility description box is descriptive

Facility Description [326 IAC 2-7-5(15)] continued Note: Complete Descriptions are shown in Section A.2.

**Kiln #2 Waste CKD Operations**

- (42) five (5) discharge hopper screws, identified as EU414.
- (43) 16" covered cross screws, identified as EU415.
- (44) #2 waste dust elevator, identified as EU416.

**Waste CKD Disposal Operations**

- (45) One (1) waste dust tank, identified as EU406.
- (46) Truck unloading, identified as EU407.
- (47) One (1) cement kiln dust haul road system, identified as EU422.
- (48) One (1) cement kiln dust pile, identified as EU423.

**Kiln #2 Recycled CKD Operations**

- (49) #2 recycled dust elevator, identified as EU417.
- (50) One (1) recycled dust holding tank, identified as EU418.
- (51) One (1) feeder screw and F-K pump, identified as EU419.
- (52) #2 recycled dust scoop/insufflation system, identified as EU420.

(The information describing the processes contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

**Emission Limitations and Standards [326 IAC 2-7-5(1)]**

**D.1.1 Particulate Emissions [326 IAC 6-3-2]**

Pursuant to 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes), the following conditions shall apply:

- (a) The allowable PM emission rate from the raw material sizing facilities (EU112, EU114 through EU122, and EU201) shall not exceed 70.1 pounds per hour when operating at a process weight rate of 550 tons per hour.
- (b) The allowable PM emission rate from the kiln #1 recycled CKD operations (EU408 through EU411) shall not exceed 25.16 pounds per hour (total for all units combined) when operating at a process weight rate of 15 tons per hour.
- (c) The allowable PM emission rate from the kiln #1 waste CKD operations (EU402 through EU405) shall not exceed 25.16 pounds per hour (total for all units combined) when operating at a combined process weight rate of 15 tons per hour.
- (d) The allowable PM emission rate from the kiln #2 waste CKD operations (EU414 through EU416) shall not exceed 25.16 pounds per hour (total for all units combined) when operating at a combined process weight rate of 15 tons per hour.
- (e) The allowable PM emission rate from the waste CKD disposal operations (EU406 and EU407) shall not exceed 39.96 pounds per hour (total for all units combined) when operating at a combined process weight rate of 30 tons per hour.
- (f) The allowable PM emission rate from the kiln #2 recycled CKD operations (EU417 through EU420) shall not exceed 25.16 pounds per hour (total for all units combined) when

operating at a process weight rate of 15 tons per hour.

The pounds per hour limitations were calculated with the following equations:

Interpolation of the data for the process weight rates up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.1 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

Interpolation and extrapolation of the data for the process weight rate in excess of 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

When the process weight rate exceeds 200 tons per hour, the maximum allowable emissions may exceed the pound per hour limit calculated using the above-referenced equation, provided the concentration of particulate matter in the discharge gases to the atmosphere is less than 0.10 pounds per on thousand (1,000) pounds of gases.

**D.1.2 Determinations of Nonapplicability [40 CFR 60, Subparts A, F, and OOO] [40 CFR 63, Subparts A and LLL]**

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- (a) None of the facilities/emission units listed in this section are subject to the requirements of the New Source Performance Standards (NSPS), 40 CFR 60, Subparts A and F (Standards of Performance for Portland Cement Plants) because they were constructed prior to the applicability date of August 17, 1971.
- (b) None of the quarry facilities/emission units or raw material sizing facilities/emission units listed in this section are subject to the requirements of the National Emissions Standards for Hazardous Air Pollutants (NESHAP) 40 CFR 63 Subparts A and LLL, because they are not affected facilities under this rule.
- (c) None of the cement kiln dust storage and handling facilities/emission units listed in this section are subject to the requirements of the National Emissions Standards for Hazardous Air Pollutants (NESHAP) 40 CFR 63 Subparts A and LLL, because they are not considered affected facilities under this rule.
- (d) None of the facilities at ESSROC are subject to the New Source Performance Standard 326 IAC 12, 40 CFR 60, Subpart OOO for Nonmetallic Mineral Processing Plants, because they were constructed prior the applicability date of August 31, 1983 or they are subject to 40 CFR 60.60 (Subpart F).

**D.1.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]**

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A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the control devices listed in this section.

**Compliance Determination Requirements**

**D.1.4 Particulate Matter (PM)**

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Except as otherwise provided by statute, rule, or this permit, in order to comply with the limits in Conditions D.1.1 and D.1.3, each baghouse for PM control shall be in operation at all times when

its associated facility is in operation.

### **Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

#### **D.1.5 Visible Emissions Notations**

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- (a) Visible emission notations of each of the baghouse stack exhausts shall be performed once per day during normal daylight operations. A trained employee shall record whether visible emissions are present.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of visible emissions for that specific process.
- (e) If visible emissions are present at any baghouse stack, the Permittee shall implement appropriate procedures as set out in its Compliance Response Plan for such facility. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

#### **D.1.6 Parametric Monitoring**

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The Permittee shall record the total static pressure drop across each baghouse, at least once per day when the associated facility is in operation. When for any one reading, the pressure drop across a baghouse is outside the normal range of 1.0 and 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside of the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

#### **D.1.7 Baghouse Inspections**

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An inspection shall be performed during every major maintenance outage, but no less than once every fourteen (14) months, of all bags controlling the facilities listed in this section. Inspections required by this condition shall not be performed in consecutive months. All defective bags shall be replaced.

#### **D.1.8 Broken or Failed Bag Detection**

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In the event that bag failure has been observed.

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) business hours of the

determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit. If operations continue after bag failure is observed and it will be 10 days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

- (b) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then the failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

#### **Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

##### **D.1.9 Record Keeping Requirements**

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- (a) To document compliance with Condition D.1.5, the Permittee shall maintain records of visible emission notations of the baghouse stack exhausts once per day and of the visible emission notations of the quarry activities once per day.
- (b) To document compliance with Condition D.1.6, the Permittee shall maintain records of the pressure drop once per day during normal operation when venting to the atmosphere:
- (c) To document compliance with Condition D.1.7, the Permittee shall maintain records of the results of the inspections required under Condition D.1.7.
- (d) To document compliance with Condition D.1.3, the Permittee shall maintain records of any additional inspections prescribed by the Preventive Maintenance Plan.
- (e) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

## **SECTION D.2**

## **FACILITY OPERATION CONDITIONS**

Facility Description [326 IAC 2-7-5(15)] Note: Complete Descriptions are shown in Section A.2.

**Clay Processing Operations**

- (53) Clay unloading to hopper, identified as EU123.
- (54) One (1) wobbler feeder for transferring clay to the log washer system, identified as EU124.
- (55) One (1) log washer system, identified as EU125.
- (56) One (1) waste gravel pile, identified as EU126.
- (57) Loading waste gravel into trucks, identified as EU127.

**Crane Storage Facilities**

- (58) Three (3) limestone storage bins, identified as EU202.
- (59) One (1) Missouri clay storage bin, identified as EU203.
- (60) One (1) iron storage bin, identified as EU204.
- (61) West flyash truck unloading utilizing pneumatic conveying, identified as EU210.
- (62) One (1) inside west flyash holding tank, identified as EU211.
- (63) East flyash truck unloading utilizing pneumatic conveying, identified as EU213.
- (64) One (1) east flyash storage bin, identified as EU214.
- (65) One (1) spare storage bin, identified as EU314.
- (66) One (1) coal/coke storage bin, identified as EU315.
- (67) Two (2) gypsum storage bins, identified as EU316.
- (68) Clinker bin 1 finish mill #1, identified as EU505.
- (69) Stone/clinker bin 2 finish mill #1, identified as EU506.
- (70) Clinker bin 3 finish mill #1, identified as EU507.
- (71) Crane unloading, identified as EU510.
- (72) Clinker bin 1 #2 finish mill, identified as EU520.
- (73) Clinker bin 2 #2 finish mill, identified as EU521.
- (74) Bin 1 clinker spill pile, identified as EU522.

**Raw Mill Facilities**

- (75) Three belt feeders, identified as EU205.
- (76) One (1) Missouri clay belt feeder, identified as EU206.
- (77) One (1) iron feeder, identified as EU207.
- (78) One (1) covered cross belt, identified as EU208.
- (79) One (1) covered raw mill feed belt, identified as EU209.
- (80) Transfer screw to raw mill, identified as EU212.
- (81) One (1) east short covered screw, identified as EU215.
- (82) One (1) E-W long covered screw, identified as EU216.

**Unloading Station Facilities**

- (83) Railroad unloading, identified as EU307.
- (84) One (1) unloading station hopper, identified as EU308.
- (85) One (1) belt feeder, identified as EU309.
- (86) Belt 7 covered conveyor, identified as EU310.
- (87) Conveyor transfer to outside storage, identified as EU311.

**Fossil Fuel Facilities**

- (88) One (1) spare belt feeder to belt 8, identified as EU317.
- (89) One (1) coal/coke belt feeder to belt 8, identified as EU318.
- (90) Belt 8 to coal/coke tanks, identified as EU319.
- (91) One (1) coal/coke tank #1, identified as EU320.
- (92) Belt feed to coal mill #1, identified as EU321.
- (93) Coal/Coke cross belt, identified as EU322.
- (94) One (1) coal/coke tank #2, identified as EU323.
- (95) Belt feed to coal mill #2, identified as EU324.



Facility Description [326 IAC 2-7-5(15)] continued Note: Complete Descriptions are shown in Section A.2.

**Kiln #1 Clinker Handling Facilities**

- (96) One (1) #1 clinker drag conveyor, identified as EU501.
- (97) #1 CCDC screws, identified as EU502.
- (98) #1 clinker elevator, identified as EU503.
- (99) Clinker conveyor transfer system, identified as EU504.

**Kiln #2 Clinker Handling Facilities**

- (100) #2 clinker drag conveyor, identified as EU516.
- (101) #2 CCDC screw conveyor, identified as EU517.
- (102) #2 clinker elevator, identified as EU518.
- (103) Clinker conveyor transfer system circuit, identified as EU519.

**Finish Mill #1 Facilities**

- (104) Clinker bin #1 feeder, identified as EU508.
- (105) Stone/clinker bin 2 feeder, identified as EU509.
- (106) One (1) gypsum feed belt, identified as EU511.
- (107) One (1) finish mill #1 feed belt, identified as EU601.
- (108) one (1) finish mill #1 circuit, identified as EU602.
- (109) One (1) separator, cooler #1 and transfer, identified as EU603.

**Finish Mill #2 Facilities**

- (110) Clinker bin 1 feeder, identified as EU523.
- (111) Clinker bin 2 feeder, identified as EU524.
- (112) FM #2 gypsum feeder, identified as EU525.
- (113) One (1) finish mill #2 feed belt, identified as EU604.
- (114) One (1) finish mill #2 circuit, identified as EU605.
- (115) One (1) separator, cooler #2 and transfer, identified as EU606.

**Finish Product Silo Storage Facilities**

- (116) Silos 11/12/13/14/15/16/17/18, identified as EU704.
- (117) Silos 1/2/3/4/5/6/7/8, identified as EU709.
- (118) Silos 9/10, identified as EU711.

**Finish Product Silo Transfer Operations**

- (119) Truck/Railroad car unloading and internal transfers to silos, identified as EU701 and EU702.

**Finish Product Loadout Old Silos (West) Operation**

- (120) Bulk truck loadout, identified as EU712.
- (121) Bulk railroad loadout, identified as EU713.

**Finish Product Loadout New Silos (East) Operation**

- (122) Bulk truck loadout, identified as EU706.

(The information describing the processes contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Facility Description [326 IAC 2-7-5(15)] continued Note: Complete Descriptions are shown in Section A.2.

**Finish Product Masonry Packing**

- (123) Transfer to masonry packer, identified as EU801
- (124) One (1) masonry packer, identified as EU802.
- (125) Transfer to pallets/storage (masonry), identified as EU803.

**Finish Product Portland Packing**

- (126) Transfer to portland packer, identified as EU804,
- (127) One (1) portland packer, identified as EU805.
- (128) Transfer to pallets/storage (portland), identified as EU806.

(The information describing the processes contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

**Emission Limitations and Standards [326 IAC 2-7-5(1)]**

**D.2.1 Particulate Emissions [326 IAC 6-3-2]**

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the following conditions shall apply:

- (1) The allowable PM emission rate from the clay processing facilities (EU123 through EU125, and EU127) shall not exceed 39.96 pounds per hour (total for all units combined) when operating at a process weight rate of 30 tons per hour.
- (2) The allowable PM emission rate from the raw material storage process (EU202, EU204, EU210, EU211, EU213 and EU214) shall not exceed 58.51 pounds per hour (total for all units combined) when operating at a process weight rate of 200 tons per hour.
- (3) The allowable PM emission rate from the process for transferring clinker from storage bins to finish mills (EU505 through EU509, EU511, EU520, EU521, and EU523 through EU525) shall not exceed 43.6 pounds per hour (total for all units combined) when operating at a process weight rate of 45 tons per hour.
- (4) The allowable PM emission rate from the raw mill facilities (EU205-209 and EU212, and EU215 and EU216) shall not exceed 57.07 pounds per hour (total for all units combined) when operating at a process weight rate of 175 tons per hour.
- (5) The allowable PM emission rate from the unloading station facilities (EU307 through EU311) shall not exceed 58.51 pounds per hour (total for all units combined) when operating at a process weight rate of 200 tons per hour.
- (6) The allowable PM emission rate from the fossil fuel facilities (EU314 through EU324) shall not exceed 58.51 pounds per hour (total for all units combined) when operating at a process weight rate of 200 tons per hour.
- (7) The allowable PM emission rate from the kiln #1 clinker handling facilities (EU501 through EU504) shall not exceed 42.97 pounds per hour (total for all units combined) when operating at a process weight rate of 42 tons per hour.

- (8) The allowable PM emission rate from the kiln #2 clinker handling facilities (EU516 through EU519) shall not exceed 42.97 pounds per hour (total for all units combined) when operating at a combined process weight rate of 42 tons per hour.
- (9) The allowable PM emission rate from the finish mill #1 (EU601 through EU603) shall not exceed 43.6 pounds per hour (total for all units combined) when operating at a process weight rate of 45 tons per hour.
- (10) The allowable PM emission rate from the finish mill #2 (EU604 through EU606) shall not exceed 43.6 pounds per hour (total for all units combined) when operating at a process weight rate of 45 tons per hour.
- (11) The allowable PM emission rate from the silos (EU703 through EU705 and EU707 through EU711) shall not exceed 66.89 pounds per hour (total for all units combined) when operating at a process weight rate of 420 tons per hour.
- (12) The allowable PM emission rate from the west bulk truck loadout (EU712) shall not exceed 67.7 pounds per hour when operating at a process weight rate of 450 tons per hour.
- (13) The allowable PM emission rate from the east bulk truck loadout (EU706) shall not exceed 67.7 pounds per hour when operating at a process weight rate of 450 tons per hour.
- (14) The allowable PM emission rate from the truck/RR car unloading process and internal transfer to silos (EU701 and EU702) shall not exceed 51.28 pounds per hour (total for both units combined) when operating at a process weight rate of 100 tons per hour.
- (15) The allowable PM emission rate from the bulk RR loadout process (EU713) shall not exceed 51.28 pounds per hour when operating at a process weight rate of 100 tons per hour.
- (16) The allowable PM emission rate from the finish product masonry packing (EU801 through EU803) shall not exceed 43.4 pounds per hour (total for all units combined) when operating at a process weight rate of 44 tons per hour.
- (17) The allowable PM emission rate from the finish product portland packing (EU804 through EU806) shall not exceed 43.4 pounds per hour (total for all units combined) when operating at a process weight rate of 44 tons per hour.

The pounds per hour limitations were calculated with the following equations:

Interpolation of the data for the process weight rates up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.1 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

Interpolation and extrapolation of the data for the process weight rates in excess of 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

When the process weight rate exceeds 200 tons per hour, the maximum allowable emission may

exceed the pound per hour limit calculated using the above-referenced equation, provided the concentration of particulate matter in the discharge gases to the atmosphere is less than 0.10 pounds per on thousand (1,000) pounds of gases.

**D.2.2 General Provisions Relating to NESHAP [326 IAC 20-1][40 CFR Part 63, Subpart A]**

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Except when otherwise specified in 40 CFR Part 63, Subpart LLL, the provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 20-1, apply to all the facilities described in this section, except for the open/unenclosed material stockpiles and haul roads.

**D.2.3 NESHAP Emissions Limitation [40 CFR 63, Subpart LLL]**

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The NESHAP 40 CFR 63, Subpart LLL and 326 IAC 20-27-1 applies to all of the emission units listed in this section, except for the open/unenclosed material stockpiles and haul roads. Pursuant to 40 CFR 63.1348 (Emissions Standards and Operating Limits), on and after June 14, 2002, which is the compliance date for the National Emission Standards for Hazardous Air Pollutants (NESHAP) from the Portland Cement Manufacturing Industry, the visible emissions from each of the affected facilities listed in this section shall not exceed ten percent (10%) opacity.

**D.2.4 Determinations of Nonapplicability [40 CFR 60, Subparts A and F]**

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None of the facilities listed in this section, except for the east and west flyash truck unloading facilities (EU210 and EU213), are subject to the requirements of the New Source Performance Standards (NSPS), 40 CFR 60, Subparts A and F (Standards of Performance for Portland Cement Plants) because they were constructed prior to the applicability date of August 17, 1971.

**D.2.5 Preventive Maintenance Plan [326 IAC 2-7-5(13)]**

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A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the control devices listed in this section.

**Compliance Determination Requirements**

**D.2.6 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11] [40 CFR 63, Subpart LLL]**

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- (a) No later than 180 days after June 14, 2002, which is the compliance date for the Portland Cement Manufacturing Industry NESHAP, the Permittee shall demonstrate initial compliance with the limits established in Condition D.2.3 by conducting a test in accordance with 40 CFR 63.1349, Method 9 of 40 CFR Part 60, Appendix A, and Section C - Performance Testing.
- (b) In order to demonstrate compliance with Condition D.2.1, the Permittee shall perform PM testing on the Finish mill #1 (EU601 through EU603), Finish mill #2 (EU604 through EU606), and Raw Mills (EU205 through EU209, EU212, EU215, and EU216) utilizing methods as approved by the Commissioner. These tests shall be conducted within 180 days after issuance of this Part 70 permit. These tests shall be repeated at least once every five years. Testing shall be conducted in accordance with Section C- Performance Testing. All associated facilities exhausting to a single stack must all be operating when determining compliance with the limit.

**D.2.7 Particulate Matter (PM)**

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Except as otherwise provided by statute, rule, or this permit, in order to comply with conditions D.2.1 and D.2.3, each baghouse for PM control shall be in operation at all times when its associated facility is in operation.

**D.2.8 NESHAP Monitoring Requirements [40 CFR 63, Subpart LLL]**

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- (a) Pursuant to 40 CFR 63.1350 (Monitoring Requirements), the Permittee shall prepare a written operations and maintenance plan for each affected source by June 14, 2002, which is the compliance date for the National Emission Standards for Hazardous Air Pollutants (NESHAP) from the Portland Cement Manufacturing Industry. The plan shall include the following information:
- (1) Procedures for proper operation and maintenance of the affected sources and associated air pollution control device(s) in order to meet the emissions limit in Condition D.2.3; and
  - (2) Procedures to be used to periodically monitor the facilities listed in this section, which are subject to opacity standards under 40 CFR 63.1348. Such procedures must include the following provisions:
    - (A) The Permittee shall conduct a monthly 1-minute visible emissions test of each affected source except for the finish mills and raw mills, in accordance with 40 CFR 60, Appendix A, Method 22. The test must be conducted while the affected source is in operation.
    - (B) If no visible emissions are observed in six consecutive monthly tests for any affected source, the Permittee may decrease the frequency of testing from monthly to semi-annually for that affected source. If visible emissions are observed during any semi-annual test, the Permittee shall resume testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.
    - (C) If no visible emissions are observed during the semi-annual test for any affected source, the Permittee may decrease the frequency of testing from semi-annually to annually for that affected source. If visible emissions are observed during any annual test, the Permittee shall resume testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.
    - (D) If visible emissions are observed during any Method 22 test, the Permittee must conduct a 6-minute test of opacity in accordance with 40 CFR 60, Appendix A, Method 9. The Method 9 test must begin within one hour of any observation of visible emissions.
  - (3) Corrective actions to be taken when required by paragraph (b).

Failure to comply with any provision of the operations and maintenance plan shall be a violation of the standard.

- (b) Pursuant to 40 CFR 63.1350 (Monitoring Requirements), the Permittee shall monitor opacity from the raw mills and finish mills by conducting daily visual emissions observations of the mill sweep and air separator particulate matter control devices (PMCDs), in accordance with the procedures of 40 CFR 60, Appendix A, Method 22. The Method 22 test shall be conducted while the affected source is operating at the representative performance conditions in accordance with 40 CFR 63.7(e). The duration of the Method 22 test shall be six minutes. If visible emissions are observed during any Method 22 visible emissions test, the Permittee must initiate, within one (1) hour, the corrective actions specified in the site specific operations and maintenance plan developed

in accordance with 40 CFR 63.1350(a)(1) and (a)(2); and conduct a follow-up Method 22 test. If visible emissions are observed, then within 24 hours of the end of the Method 22 test in which the visible emissions were observed, the Permittee must conduct a followup Method 22 test of each stack from which visible emissions were observed during the previous Method 22 test. If visible emissions are observed during the followup Method 22 test, the Permittee must conduct a visual opacity test of each stack from which visible emissions were observed during the followup Method 22 test, in accordance with 40 CFR 60, Appendix A, Method 9. The duration of the Method 9 test shall be thirty minutes.

- (c) For any partially enclosed or unenclosed conveying system transfer point located in a building, the Permittee shall have the option to conduct a Method 22 visible emissions monitoring test according to the requirements of paragraphs 40 CFR 63.1350(a)(4)(i) through (iv) for each such conveying system transfer point located within the building, or for the building itself [according to paragraph 40 CFR 63.1350(a)(4)(vii)]. If visible emissions from a building are monitored, the requirements of paragraphs 40 CFR 63.1350(a)(4)(i) through (iv) apply to the monitoring of the building, and the Permittee must also do the following: Test visible emissions from each side, roof and vent of the building for at least 1 minute. The test must be conducted under normal operating conditions.

#### **Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

##### **D.2.9 Visible Emissions Notations**

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- (a) Visible emission notations of each of the baghouse stack exhausts shall be performed once per day during normal daylight operations. A trained employee shall record whether visible emissions are present.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of visible emissions for that specific process.
- (e) On days that the NESHAP monitoring required in Condition D.2.8 is performed, the Permittee may use those results to satisfy the requirements of this condition for the units subject to the NESHAP.
- (f) If visible emissions are present at any baghouse stack, the Permittee shall implement the appropriate procedures as set out in its Compliance Response Plan for such facility. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

##### **D.2.10 Parametric Monitoring**

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The Permittee shall record the total static pressure drop across each baghouse, at least once per day when the associated facility is in operation. When for any one reading, the pressure drop across a baghouse is outside the normal range of 1.0 and 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records,

and Reports. A pressure reading that is outside of the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

#### D.2.11 Baghouse Inspections

An inspection shall be performed during every major maintenance outage, but no less than once every fourteen (14) months, of all bags controlling the facilities listed in this section. Inspections required by this condition shall not be performed in consecutive months. All defective bags shall be replaced.

#### D.2.12 Broken or Failed Bag Detection

In the event that bag failure has been observed.

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit. If operations continue after bag failure is observed and it will be 10 days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.
- (b) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then the failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

### **Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

#### D.2.13 Record Keeping Requirements

- (a) To document compliance with Condition D.2.9, the Permittee shall maintain records of visible emission notations of the baghouse stack exhausts once per day.
- (b) To document compliance with Condition D.2.10, the Permittee shall maintain records of the pressure drop once per day during normal operation when venting to the atmosphere:
- (c) To document compliance with Condition D.2.11, the Permittee shall maintain records of the

results of the inspections required under Condition D.2.11.

- (d) To document compliance with the NESHAP 40 CFR 63, Subpart LLL, the Permittee shall maintain all records required by 40 CFR 63.1355. These records include the following:
  - (1) The Permittee shall maintain files of all information (including all reports and notifications) required by 40 CFR 60.1355(a) recorded in a form suitable and readily available for inspection and review as required by 40 CFR 63.10(b)(1).
  - (2) The Permittee shall maintain records for each affected source as required by 40 CFR 63.10(b)(2) and (3) including:
    - (A) All documentation supporting initial notifications and notifications of compliance status under 40 CFR 63.9.
    - (B) All records of applicability determination, including supporting analyses.
- (f) To document compliance with Condition D.2.5, the Permittee shall maintain records of any additional inspections prescribed by the Preventive Maintenance Plan.
- (g) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### D.2.16 Reporting Requirements

- (a) To document compliance with the NESHAP 40 CFR 63, Subpart LLL, the Permittee shall report the information required by 40 CFR 63.1354, including, but not limited to the following:
  - (1) The plan required by Condition D.2.8 shall be submitted to IDEM, OAQ and U.S. EPA by June 14, 2002, which is the compliance date for the National Emission Standards for Hazardous Air Pollutants (NESHAP) for the Portland Cement Manufacturing Industry.
  - (2) As required by 40 CFR 63.10(d)(2), the Permittee shall report the results of performance tests as part of the notification of compliance status, required in Section C - NESHAP Notification and Reporting Requirements.
  - (3) As required by 40 CFR 63.10(d)(3), the Permittee shall report the opacity results from tests required by 40 CFR 63.1349.
  - (4) As required by 40 CFR 63.10(d)(5), if actions taken by the Permittee during a startup, shutdown, or malfunction of an affected source (including actions taken to correct a malfunction) are consistent with the procedures specified in the source's startup, shutdown, and malfunction plan specified in 40 CFR 63.6(e)(3), the Permittee shall state such information in a semiannual report. Reports shall only be required if a startup, shutdown, or malfunction occurred during the reporting period. The startup, shutdown, and malfunction report may be submitted simultaneously with the excess emissions and continuous monitoring system performance reports.
  - (5) Pursuant to 40 CFR 63.10(d)(5)(ii), any time an action taken by the Permittee during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) is not consistent with the procedures in the startup, shutdown, and



malfunction plan, the Permittee shall report the actions taken for that event within 2 working days after commencing actions inconsistent with the plan, by telephone call to the OAQ Compliance Section at (317) 233-5674 or facsimile (FAX) transmission at (317) 233-6865. The immediate report shall be followed by a letter within 7 working days after the end of the event, certified by the Permittee, explaining the circumstances of the event, the reasons for not following the startup, shutdown, and malfunction plan, and whether any excess emissions and/or parameter monitoring exceedances are believed to have occurred.

- (b) In addition to being submitted to the address listed in Section C - General Reporting Requirements, all reports and the operation and maintenance plan submitted pursuant to 40 CFR 63, Subpart A shall also be submitted to the U.S. EPA at the following address:

United States Environmental Protection Agency, Region V  
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590

Pursuant to 40 CFR 63.10(d)(5)(i) and (ii), the reports submitted by the Permittee shall include the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

## SECTION D.3 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)] Note: Complete Descriptions are shown in Section A.2.

(136) One (1) wet process rotary cement kiln #1, identified as EU401.

(137) One (1) wet process rotary cement kiln #2, identified as EU413.

As an alternative operating scenario (listed in Condition D.3.4), when a kiln is combusting non-hazardous waste fuels, the source may choose to operate the kilns in compliance with the alternate emission limitations.

(The information describing the processes contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

### Emission Limitations and Standards [326 IAC 2-7-5(1)]

#### D.3.1 Sulfur Dioxide (SO<sub>2</sub>) [326 IAC 7-1.1-1] [326 IAC 7-2-1]

- (a) Pursuant to 326 IAC 7-1.1 (SO<sub>2</sub> Emissions Limitations) the SO<sub>2</sub> emissions from the combustion of coal or the simultaneous combustion of coal and oil, in kiln #1 and kiln #2 shall not exceed six (6.0) pounds per MMBtu heat input. Pursuant to 326 IAC 7-2-1, compliance shall be demonstrated on a calendar month average.
- (b) Pursuant to 326 IAC 7-1.1 (SO<sub>2</sub> Emissions Limitations) the SO<sub>2</sub> emissions from the combustion of fuel oil only from each of the kilns shall not exceed five tenths (0.5) pounds per MMBtu heat input. Pursuant to 326 IAC 7-2-1, compliance shall be demonstrated on a calendar month average.

#### D.3.2 General Provisions Relating to NESHAP [326 IAC 20-1][40 CFR Part 63, Subpart A]

The provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 20-1, and listed in Table 1 of 40 CFR 63, Subpart EEE, apply to kiln #1 and kiln #2 described in this section except when otherwise specified in 40 CFR Part 63, Subpart EEE.

#### D.3.3 NESHAP Emissions Limitation [40 CFR Part 63, Subpart EEE]

Pursuant to 40 CFR 63.1204 (Emissions Standards and Operating Limits), on and after September 30, 2002, which is the compliance date for the National Emission Standards for Hazardous Air Pollutants (NESHAP) for the Hazardous Waste Combustors, kiln #1 and kiln #2 shall be limited as follows:

- (1) Dioxin/Furan emissions shall be limited to 0.20 nanograms (TEQ) per dry standard cubic meter corrected to seven percent oxygen; or 0.40 nanograms (TEQ) per dry standard cubic meter corrected to seven percent oxygen, provided that the average combustion gas temperatures at the inlet to the particulate matter control device is 400 degrees Fahrenheit or lower based on the average of the test run average temperatures.
- (2) Mercury emissions shall be limited to 120 micrograms/dscm corrected to seven percent oxygen.
- (3) Lead and cadmium combined emissions shall be limited to 330 micrograms/dscm corrected to seven percent oxygen.
- (4) Arsenic, beryllium, and chromium combined emissions shall be limited to 56

micrograms/dscm corrected to seven percent oxygen.

- (5) Hydrocarbons in the main stack shall not exceed 20 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to seven percent oxygen, and reported as propane; or
- (6) Hydrochloric acid and chlorine gas combined emissions shall not exceed 130 parts per million by volume, expressed as hydrochloric acid equivalents, dry basis, corrected to seven percent oxygen.
- (7) Particulate matter (PM) emissions shall be limited to 0.30 pound per ton of feed (dry basis) to the kiln.
- (8) Visible emissions shall be limited to twenty percent (20%) opacity.

#### D.3.4 Alternate Emission Limitations [40 CFR Part 63.1206, Subpart EEE]

- (I) Pursuant to 40 CFR 63, Subpart EEE, the emission standards and operating requirements of 40 CFR 63, Subpart EEE, shall not apply during those periods of operation when hazardous waste is not in the combustion chamber and the Permittee has documented in the operating record that the source is complying with such applicable requirements in lieu of the emission standards and operating requirements of this subpart.
- (II) During those periods of operation when hazardous waste is not in the combustion chamber and the Permittee has complied with (a) and (b) above, the following conditions shall apply instead of the limits listed in Condition D.3.3.
  - (a) Particulate matter (PM) emissions shall be limited to 0.30 pound per ton of feed (dry basis) to each kiln.
  - (b) Visible emissions shall be limited to twenty percent (20%) opacity.
  - (c) Dioxin/Furan emissions shall be limited to 0.20 nanograms (TEQ) per dry standard cubic meter corrected to seven percent oxygen; or 0.40 nanograms (TEQ) per dry standard cubic meter corrected to seven percent oxygen, provided that the average combustion gas temperatures at the inlet to the particulate matter control device is 400 degrees Fahrenheit or lower based on the average of the test run average temperatures.
  - (d) The kilns shall be operated such that the temperature of the gas at the inlet to the kiln's particulate matter control device does not exceed the average of the run average temperatures determined during the performance tests required in Condition D.3.9.

#### D.3.5 Determinations of Nonapplicability [40 CFR 60, Subparts A and F]

The kilns #1 and #2 are not subject to the requirements of the New Source Performance Standards (NSPS), 40 CFR 60, Subparts A and F (Standards of Performance for Portland Cement Plants) because they were constructed prior to the applicability date of August 17, 1971.

#### D.3.6 National Emission Standard for Benzene Waste Operations [40 CFR Part 61, Subpart FF]

Pursuant to 40 CFR 61, Subpart FF - National Emissions Standard for Benzene Waste Operations, the Permittee shall be exempt from the requirements of 40 CFR 61.342(b) and (c) and Condition D.3.6 of this permit, if the total annual benzene quantity from the facility waste is less than 10 megagrams per year (Mg/yr).

- (a) The Permittee shall design, install, operate and maintain the kilns to destroy the benzene contained in waste streams meeting the criteria specified in 40 CFR 61.340(b).
- (b) Pursuant to 40 CFR 61.348(a)(1)(iii), the Permittee shall destroy the benzene in the waste stream by utilizing one of the methods described in 40 CFR 61.348(a)(1)(i), (ii), and/or (iii).
- (c) As provided in 40 CFR 61.348(a)(4), the Permittee may aggregate or mix together individual waste streams to create a combined waste stream for the purpose of facilitating treatment of waste to comply with part (a) of this condition.
- (d) Pursuant to 40 CFR 61.348(c), the Permittee shall demonstrate that each treatment process, except as provided by 40 CFR 61.348(d), achieves the appropriate conditions specified in 40 CFR 61.348(a) or (b) in accordance with 40 CFR 61.348(c)(1) or (2)
  - (1) A treatment process is in compliance with the requirements of 40 CFR 61.348(c) and Condition D.3.6(c) of this permit provided that the Permittee documents that the treatment process or waste stream is in compliance with 40 CFR 61.348(c)(1), (2), (3), (4) or (5).
- (e) Pursuant to 40 CFR 61.348(e), except as specified in paragraph 40 CFR 61.348(e)(3), if the treatment process has any openings (e.g., access doors, hatches, etc.), all such openings shall be sealed (gasketed, latched, etc.) and kept closed at all times when the waste is being treated, except during inspection and maintenance.
- (f) Pursuant to 40 CFR 61.348(g), except for a treatment process or waste stream complying with 40 CFR 61.348(d), the treatment process that is used to comply with the provisions of 40 CFR 61.348 and Section D.3.6 of this permit shall monitor the unit in accordance with the applicable requirements of 40 CFR 61.354.

D.3.7 PSD Applicability for kilns [326 IAC 2-2-3] [326 IAC 2-7-6(3)] [326 IAC 2-7-15]

The EPA has alleged an enforcement action that the kilns are subject to the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration). Therefore, the Permit Shield provided by Condition B.13 of this permit does not apply to the kilns with regards to 326 IAC 2-2 (PSD). If the enforcement action results in a settlement or determination that the kilns are subject to 326 IAC 2-2, the OAQ will promptly reopen this permit using the provisions of 326 IAC 2-7-9 (Permit Reopening) to include detailed requirements necessary to comply with 326 IAC 2-2 (PSD) and a schedule for achieving compliance with such requirements.

D.3.8 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

- (a) A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and the control devices.
- (b) The PMP for an electrostatic precipitator shall include the following inspections, performed according to the indicated schedules:
  - (1) Plate and electrode alignment, every major maintenance outage, but no less than every 14 months;
  - (2) ESP TR set components, performed whenever there is an ESP outage of any nature lasting more than five days, unless such inspections have been performed within the last six months. At a minimum, the following inspections shall be performed:

- (A) Internal inspection of shell for corrosion (including but not limited to doors, hatches, insulator housings, and roof area).
  - (B) Effectiveness of rapping (including but not limited to buildup of dust on discharge electrodes and plates).
  - (C) Gas distribution (including but not limited to buildup of dust on distribution plates and turning vanes).
  - (D) Dust accumulation (including but not limited to buildup of dust on shell and support members that could result in grounds or promote advanced corrosion).
  - (E) Major misalignment of plates (including but not limited to a visual check of plate alignment).
  - (F) Rapper, vibrator and TR set control cabinets (including but not limited to motors and lubrication).
  - (G) Rapper assembly (including but not limited to loose bolts, ground wires, water in air lines, and solenoids).
  - (H) Vibrator and rapper seals (including but not limited to air in-leakage, wear, and deterioration).
  - (I) TR set controllers (including but not limited to low voltage trip point, over current trip point, and spark rate).
  - (J) Vibrator air pressure settings.
- (3) Air and water infiltration, once per month. The recommended method for this inspection is for audible checks around ash hoppers/hatches, duct expansion joints, and areas of corrosion.

Appropriate response steps for any failures, malfunctions, or abnormal conditions in the above list found during the inspection shall be taken in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

### Compliance Determination Requirements

D.3.9 Testing Requirements [40 CFR 63, Subpart EEE] [326 IAC 2-7-6(1),(6)] [326 IAC 2-1-3(i)(8)] [326 IAC 2-1.1-11]

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- (a) No later than six months after September 30, 2003, which is the compliance date for the National Emission Standards for Hazardous Air Pollutants (NESHAP) for the Hazardous Waste Combustors, the Permittee shall demonstrate initial compliance with the emission limits established in Condition D.3.3 by commencing initial comprehensive performance tests in accordance with 40 CFR 63.1207 and Section C - Performance Testing. These tests shall also establish limits for the operating parameters provided by 40 CFR 63.1209, and demonstrate compliance with the performance specifications for continuous monitoring systems. The testing must be completed within 60 days after the date of commencement.

These tests shall be repeated at least once every 2.5 years from the date of this valid compliance demonstration.

- (b) During each stack test required above, the following items shall be performed:
- (1) Certified continuous opacity monitoring (COM) data shall be observed and recorded or EPA Method 9 opacity tests shall be performed.
  - (2) The kiln temperature and oxygen concentration shall be measured and recorded.
  - (3) The kiln feed rate shall be measured and recorded.
  - (4) Pursuant to 326 IAC 3-6-3(b)(2), 40 CFR 63.7(e) and 40 CFR 63.1207(g), the tests shall be conducted under representative operating conditions.
  - (5) Pursuant to 326 IAC 3-6-3(b), during the performance tests, each kiln and clinker cooler must be operating at 95 percent of its maximum production capacity or more, or under other capacities or conditions specified and approved by IDEM, to be considered a valid test.
- (c) Unless EPA grants a waiver of the test requirement, the Permittee shall demonstrate that each cement kiln achieves ninety-nine percent (99%) destruction efficiency by conducting performance tests using test methods and procedures specified in 40 CFR 61.355(f), in order to demonstrate compliance with Condition D.3.6. This testing shall be performed at the same time as the testing required by paragraph (a) of this condition.

#### D.3.10 Particulate Matter (PM)

Except as otherwise provided by statute, rule, or this permit, in order to comply with the limits in Conditions D.3.3 and D.3.4, the ESP for PM control shall be in operation at all times when either of the kilns is in operation, except as otherwise provided by statute, rule or this permit.

#### D.3.11 Sulfur Dioxide Emissions and Sulfur Content [326 IAC 2-7-5(A)] [326 IAC 2-7-6]

- (I) Pursuant to 326 IAC 7-2, the Permittee shall demonstrate that the sulfur dioxide emissions from coal combustion or simultaneous combustion of coal and oil, do not exceed six (6.0) pounds per MMBtu. Pursuant to 326 IAC 7-2, compliance with the SO<sub>2</sub> limit in D.3.1(a) shall be determined utilizing one of the following methods:
- (a) Coal sampling and analysis shall be performed using one of the following procedures:
- (1) Minimum Coal Sampling Requirements and Analysis Methods [326 IAC 3-7-2(b)(3)]:
    - (A) The coal sample acquisition point shall be at a location where representative samples of the total coal flow to be combusted by the facility or facilities may be obtained. A single as-bunkered or as-burned sampling station may be used to represent the coal to be combusted by multiple facilities using the same stockpile feed system;
    - (B) Coal shall be sampled at least three (3) times per day and at least one (1) time per eight (8) hour period unless no coal is bunkered during the preceding eight (8) hour period;

- (C) Minimum sample size shall be five hundred (500) grams;
  - (D) Samples shall be composited and analyzed at the end of each calendar month;
  - (E) Preparation of the coal sample, heat content analysis, and sulfur content analysis shall be determined pursuant to 326 IAC 3-7-2(c), (d), (e); or
- (2) Sample and analyze the coal pursuant to 326 IAC 3-7-2(a); or
  - (3) Sample and analyze the coal pursuant to 326 IAC 3-7-3; or
- (b) Upon written notification to IDEM by a facility owner or operator, continuous emission monitoring data collected and reported pursuant to 326 IAC 3-5-1 may be used as the means for determining compliance with the emission limitations in 326 IAC 7-2. Upon such notification, the other requirements of 326 IAC 7-2 shall not apply. [326 IAC 7-2-1(e)]
  - (c) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the kilns, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6, which is conducted with such frequency as to generate the amount of information required by (a) or (b) above. [326 IAC 7-2-1(b)]

A determination of noncompliance pursuant to any of the methods specified in (a), (b), or (c) above shall not be refuted by evidence of compliance pursuant to the other method.

- (II) Compliance with the limit in Condition D.3.1(b) shall be determined utilizing one of the following options.
  - (a) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed five-tenths (0.5) pounds per million Btu heat input by:
    - (1) Providing vendor analysis of fuel delivered, if accompanied by a vendor certification, or;
    - (2) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.
      - (A) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and
      - (B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling.
  - (b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from each of the kilns and heaters, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

A determination of noncompliance pursuant to any of the methods specified in (a) or (b) above shall not be refuted by evidence of compliance pursuant to the other method.

**D.3.12 Continuous Emissions Monitoring [326 IAC 3-5] [40 CFR 63, Subpart EEE] [326 IAC 2-7-6(1),(6)]**

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- (a) Pursuant to 326 IAC 3-5 (Continuous Monitoring of Emissions), 326 IAC 2 and 40 CFR 63, Subpart EEE, a continuous monitoring system shall be installed, calibrated, maintained, and operated for measuring the opacity from the kilns, pursuant to 326 IAC 3-5. The continuous monitoring system shall be installed and operational prior to conducting the performance tests required in Condition D.3.9. The continuous monitoring systems shall meet the performance specifications of 326 IAC 3-5-2 and 40 CFR 63.8(c).
- (b) Pursuant to 40 CFR 63, Subpart EEE, a continuous monitoring system shall be installed, calibrated, maintained, and operated to demonstrate compliance with the hydrocarbon limits specified in 40 CFR 63 and Condition D.3.3. An oxygen CEMS shall also be installed, calibrated, maintained, and operated to continuously correct the hydrocarbon levels to 7 percent oxygen.
- (c) The Permittee shall comply with all other monitoring requirements pursuant to 40 CFR 63, Subpart EEE.
- (d) In the event that a CEMS fails, the Permittee shall monitor the oxygen content and temperature of the kiln exhaust at least once per hour. If the oxygen content or temperature is outside the range established in the latest compliance stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

**D.3.13 NESHAP Monitoring Requirements [40 CFR 63, Subpart EEE]**

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Pursuant to 40 CFR 63, Subpart EEE, on and after September 30, 2002, which is the compliance date for the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Hazardous Waste Combustors, the Permittee shall perform the following monitoring requirements:

- (a) The Permittee shall have prepared a written operations and maintenance plan for kiln #1 and kiln #2. The plan shall include the following information:
  - (1) Procedures for proper operation, inspection, maintenance, and corrective measures for all components of kiln #1 and kiln #2 and associated air pollution control device(s) in order to meet the emissions limits in Conditions D.3.3 and D.3.4; and
  - (2) Procedures for operating and maintaining the kilns in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels achieved during the comprehensive performance test.

Failure to comply with any provision of the operations and maintenance plan shall be a violation of the standard.

- (b) The Permittee shall perform the monitoring requirements specified in 40 CFR 63.1209.

**Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

**D.3.14 ESP Parametric Monitoring and ESP Inspections**

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- (a) The ability of the ESP to control particulate emissions shall be monitored continuously, when the kilns are in operation, by measuring and recording the number of T-R sets in



service and the ESP total power.

- (b) Reasonable response steps shall be taken in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports whenever the percentage of T-R sets in service falls below 90 percent (90%).

Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

- (c) The instrument used for determining the total power shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every twelve (12) months.

#### D.3.15 Visible Emissions Notations

- (a) Whenever a continuous opacity monitor (COM) is malfunctioning or will be down for calibration, maintenance, or repairs for a period of one (1) hour or more, and the process is operating, compliance with the applicable opacity limits shall be demonstrated by the following:
  - (1) Visible emission (VE) notations shall be performed once per hour during daylight operations following the shutdown or malfunction of the primary COM. A trained employee shall record whether emissions are normal or abnormal for the state of operation of the emission unit at the time of the reading.
    - (A) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
    - (B) If abnormal emissions are noted during two consecutive emission notations, the Permittee shall begin Method 9 opacity observations within four hours of the second abnormal notation.
    - (C) VE notations may be discontinued once a COM is online or formal Method 9 readings have been implemented.
  - (2) If a COM is not online within twenty-four (24) hours, the Permittee shall provide certified opacity reader(s), who may be employees of the Permittee or independent contractors, to self-monitor the emissions from the emission unit stack.
    - (A) Visible emission readings shall be performed in accordance with 40 CFR 60, Appendix A, Method 9, for a minimum of five (5) consecutive six (6) minute averaging periods beginning not more than twenty-four (24) hours after the start of the malfunction or down time.
    - (B) Method 9 opacity readings shall be repeated for a minimum of five (5) consecutive six (6) minute averaging periods at least once every four (4) hours during daylight operations, until such time that a COM is in operation.
    - (C) Method 9 readings may be discontinued once a COM is online.
    - (D) Any opacity exceedances determined by Method 9 readings shall be

reported with the Quarterly Opacity Exceedances Reports.

- (3) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. Observation of abnormal emissions that do not violate an applicable opacity limit is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.
- (b) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous opacity monitoring system pursuant to 326 IAC 3-5 and 40 CFR 63, Subpart EEE.

#### **Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

##### **D.3.16 Record Keeping Requirements**

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- (a) To document compliance with Condition D.3.1 and D.3.11, the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken on a calendar month average and shall be complete and sufficient to establish compliance with the SO<sub>2</sub> emission limits established in D.3.1.
  - (1) Calendar dates covered in the compliance determination period;
  - (2) Actual coal and fuel oil usage since last compliance determination period;
  - (3) Sulfur content and heat content of both the coal and the fuel oil;
  - (4) Sulfur dioxide emission rates.
- (b) Pursuant to 326 IAC 3-7-5(a), the Permittee shall develop a standard operating procedure (SOP) to be followed for sampling, handling, analysis, quality control, quality assurance, and data reporting of the information collected pursuant to 326 IAC 3-7-2 through 326 IAC 3-7-4. In addition, any revision to the SOP shall be submitted to IDEM, OAQ.
- (c) To document compliance with Conditions D.3.9, D.3.12, D.3.14, and D.3.15, the Permittee shall maintain records in accordance with (1) through (6) below. Records shall be complete and sufficient to establish compliance with the limits established in Conditions D.3.3 and D.3.4.
  - (1) Data and results from the most recent stack test.
  - (2) All continuous emissions monitoring data.
  - (3) All ESP parametric monitoring readings.
  - (4) All visible emission readings and Method 9 opacity readings whenever required by D.3.15.
  - (5) All preventive maintenance measures taken.
  - (6) All response steps taken and the outcome for each.

- (d) To document compliance with the HWC NESHAP, the Permittee shall maintain all records required by 40 CFR 63.1210 and 40 CFR 63.1211, including, but not limited to, the following:
  - (1) The Permittee shall maintain files of all information (including all reports and notifications) required by this rule recorded in a form suitable and readily available for inspection and review as required by 40 CFR 63.10(b)(1).
  - (2) The Permittee shall maintain records for each affected source as required by 40 CFR 63.10(b)(2) and (3) including:
    - (A) All documentation supporting initial notifications and notifications of compliance status under 40 CFR 63.9.
    - (B) All records of applicability determination, including supporting analyses.
  - (3) The Permittee shall maintain all records of continuous monitoring system data required by 40 CFR 63.10(c).
- (e) The Permittee shall maintain the following records:
  - (1) Pursuant to 40 CFR 61.356(e)(1), the Permittee shall maintain a statement signed and dated by the Permittee certifying that the treatment unit (cement kiln) is designed to operate at the documented performance level when the waste stream entering the unit is at the highest stream flow rate and benzene content expected to occur. The documentation shall be retained for the life of the cement kilns.
  - (2) Pursuant to 40 CFR 61.356(e)(2), if engineering calculations are used, the Permittee shall maintain all records necessary to demonstrate the cement kiln performance as specified in 40 CFR 61.356(e)(2).
  - (3) Pursuant to 40 CFR 61.356(e)(3), if performance tests are used, the Permittee shall maintain all test information necessary to demonstrate the cement kiln performance as specified in 40 CFR 61.356(e)(3)(i) through (iv).
  - (4) Pursuant to 40 CFR 61.356(i), the Permittee shall maintain documentation that includes the following information regarding the cement kiln operation:
    - (A) Dates of startup and shutdown of the units.
    - (B) For a process parameter monitored in accordance with 40 CFR 61.354(a)(2), the Permittee shall maintain records that include a description of the operating parameter (or parameters) to be monitored to ensure that the units will be operated in conformance with the standard in 40 CFR 61.348(c) and the units' design specifications, and an explanation of the criteria used for selection of that parameter (or parameters). This documentation shall be kept for the life of the equipment.
    - (C) Periods when the units are not operated as designed.
- (f) To document compliance with Condition D.3.8, the Permittee shall maintain records of any additional inspections prescribed by the Preventive Maintenance Plan.

- (g) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### D.3.17 Reporting Requirements

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- (a) A quarterly summary of the information to document compliance with the SO<sub>2</sub> limit specified in Condition D.3.1 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting form located at the end of this permit, or its equivalent, within thirty (30) days after the end of the quarter being reported. This report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (b) A quarterly summary of excess opacity emissions, as defined in 326 IAC 3-5-7, from the continuous monitoring system, shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, within thirty (30) days after the end of the quarter being reported. If applicable, the excess opacity summary shall also be submitted in accordance with 40 CFR 63.10(e)(3).
- (c) The Permittee shall submit a continuous monitoring system (CMS) performance report with the excess opacity summaries, in accordance with 40 CFR 63.10(e)(3) and 40 CFR 63, Subpart A.
- (d) The Permittee shall submit a semi-annual summary report which contains the information specified in 40 CFR 63.10(e)(3)(vi). If the total continuous monitoring system (CMS) downtime for any CEM or any CMS for the reporting period is ten percent or greater of the total operating time for the reporting period, the Permittee shall submit an excess emissions and CMS performance report along with the summary report.
- (e) To document compliance with the NESHAP 40 CFR 63, Subpart EEE, the Permittee shall report the information required by 40 CFR 63, Subpart EEE including, but not limited to the following:
  - (1) Compliance progress reports as required by 40 CFR 63.1211(b) and 40 CFR 63.10(d)(4).
  - (2) As required by 40 CFR 63.10(d)(2), the Permittee shall report the results of performance tests as part of the notification of compliance status, required in Section C - NESHAP Notification and Reporting Requirements.
  - (3) As required by 40 CFR 63.10(d)(3), the Permittee shall report the opacity results from tests required by 40 CFR 63.1207.
  - (4) As required by 40 CFR 63.10(d)(5), if actions taken by the Permittee during a startup, shutdown, or malfunction of an affected source (including actions taken to correct a malfunction) are consistent with the procedures specified in the source's startup, shutdown, and malfunction plan specified in 40 CFR 63.6(e)(3), the Permittee shall state such information in a semiannual report. Reports shall only be required if a startup, shutdown, or malfunction occurred during the reporting period. The startup, shutdown, and malfunction report may be submitted simultaneously with the excess emissions and continuous monitoring system performance reports.
  - (5) Pursuant to 40 CFR 63.10(d)(5)(ii), any time an action taken by the Permittee

during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) is not consistent with the procedures in the startup, shutdown, and malfunction plan, the Permittee shall report the actions taken for that event within 2 working days after commencing actions inconsistent with the plan, by telephone call to the OAQ Compliance Section at (317) 233-5674 or facsimile (FAX) transmission at (317) 233-6865. The immediate report shall be followed by a letter within 7 working days after the end of the event, certified by the Permittee, explaining the circumstances of the event, the reasons for not following the startup, shutdown, and malfunction plan, and whether any excess emissions and/or parameter monitoring exceedances are believed to have occurred.

- (6) Pursuant to 40 CFR 63.1206(c)(3)(vi), the Permittee shall report excessive exceedances.
- (7) Pursuant to 40 CFR 63.1206(c)(4)(iv), the Permittee shall report emergency safety vent openings.
- (f) Pursuant to 40 CFR 61.357(d)(2), the Permittee shall submit to the US EPA and IDEM, OAQ an annual report containing the following information:
  - (1) If the total annual benzene quantity from the facility waste is less than 1 Mg/yr (1.1 ton/yr), the applicable reporting requirements of 40 CFR 61.357(b);
  - (2) If the total annual benzene quantity from the facility waste is less than 10 Mg/yr (11 ton/yr) but is equal to or greater than 1 Mg/yr (1.1 tons/yr), the applicable reporting requirements of 40 CFR 61.357(c);
  - (3) If the total annual benzene quantity from the facility waste is equal to or greater than 10 Mg/yr (11 ton/yr), the applicable reporting requirements of 40 CFR 61.357(d).
- (g) In addition to being submitted to the address listed in Section C - General Reporting Requirements, all reports submitted pursuant to 40 CFR 60, Subpart A, or 40 CFR 63, Subpart A shall also be submitted to the U.S. EPA at the following address:

United States Environmental Protection Agency, Region V  
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590

Pursuant to 40 CFR 63.10(d)(5)(i) and (ii), the reports submitted by the Permittee shall include the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

## SECTION D.4

## FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)] Note: Complete Descriptions are shown in Section A.2.

### The clinker cooler #1 facilities

(138) One (1) clinker cooler #1, identified as EU412.

### The clinker cooler #2 facilities

(139) One (1) clinker cooler #2, identified as EU421.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

## Emission Limitations and Standards [326 IAC 2-7-5(1)]

### D.4.1 General Provisions Relating to NESHAP [326 IAC 20-1][40 CFR Part 63, Subpart A]

The provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 20-1, apply to the clinker coolers described in this section except when otherwise specified in 40 CFR Part 63, Subpart LLL.

### D.4.2 NESHAP Emissions Limitation [40 CFR 63, Subpart LLL]

Pursuant to 40 CFR 63.1345 (Emissions Standards and Operating Limits), on and after June 14, 2002, which is the compliance date for the National Emission Standards for Hazardous Air Pollutants (NESHAP) from the Portland Cement Manufacturing Industry, each clinker cooler shall be limited as follows:

- (a) Particulate matter (PM) emissions shall be limited to 0.10 pound per ton of feed (dry basis) to the kiln.
- (b) Visible emissions shall be limited to ten percent (10%) opacity.

### D.4.3 Determination of Nonapplicability [40 CFR 60, Subparts A and F]

The clinker cooler #1 is not subject to the requirements of the New Source Performance Standards (NSPS), 40 CFR 60, Subparts A and F (Standards of Performance for Portland Cement Plants) because it was constructed prior to the applicability date of August 17, 1971 and has not been modified since the applicability date.

### D.4.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and their control devices.

## Compliance Determination Requirements

### D.4.5 NESHAP Testing Requirements [40 CFR 63, Subpart LLL] [326 IAC 2-1.1-11] [326 IAC 2-7-6(1),(6)] [326 IAC 2-1-3(i)(8)]

No later than 180 days after June 14, 2002, which is the compliance date for the Portland Cement Manufacturing Industry NESHAP, the Permittee shall demonstrate initial compliance with the PM and opacity limits established in Condition D.4.2 by conducting performance tests in accordance with 40 CFR 63.1349, Methods 5 and 9 of 40 CFR Part 60, Appendix A, and Section C- Performance Testing. These tests shall be repeated at least once every 2.5 years from the date of

this valid compliance demonstration.

**D.4.6 Continuous Emissions Monitoring [326 IAC 3-5] [40 CFR 60, Subpart F] [326 IAC 2-7-6(1),(6)]**

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Pursuant to 326 IAC 3-5 (Continuous Monitoring of Emissions), 326 IAC 2-1.1-11, and 40 CFR Part 63, Subpart LLL, a continuous monitoring system shall be installed, calibrated, maintained, and operated for measuring opacity from the clinker coolers. The continuous monitoring systems shall meet the performance specifications of 326 IAC 3-5-2 and shall demonstrate continuous compliance with Section C - Opacity, and Condition D.4.2(b).

**D.4.7 Particulate Control**

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In order to comply with Condition D.4.2, each baghouse for PM control shall be in operation at all times when its associated clinker cooler is in operation, except as otherwise provided by statute, rule or this permit.

**D.4.8 NESHAP Monitoring Requirements [40 CFR 63, Subpart LLL]**

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Pursuant to 40 CFR 63.1350 (Monitoring Requirements), on and after June 14, 2002, which is the compliance date for the National Emission Standards for Hazardous Air Pollutants (NESHAP) from the Portland Cement Manufacturing Industry, the Permittee shall perform the following monitoring requirements:

- (a) The Permittee shall have prepared a written operations and maintenance plan for the clinker coolers. The plan shall include the procedures for proper operation and maintenance of the clinker coolers and associated air pollution control device(s) in order to meet the emissions limit in Condition D.4.2. Failure to comply with any provision of the operations and maintenance plan shall be a violation of the standard.
- (b) The Permittee shall continuously monitor opacity of emissions at the outlet of the PM control device. The COM required by Condition D.4.6 shall be used to monitor opacity emissions in accordance with the NESHAP and shall be installed, maintained, calibrated and operated as required by 40 CFR 63, Subpart A and according to 40 CFR 60, Appendix B, PS-1.

**Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

**D.4.9 Parametric Monitoring**

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The Permittee shall record the total static pressure drop across each baghouse, at least once per day when the associated facility is in operation. When for any one reading, the pressure drop across a baghouse is outside the normal range of 1.0 and 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside of the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

**D.4.10 Baghouse Inspections**

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An inspection shall be performed during every major maintenance outage, but no less than once every fourteen (14) months, of all bags controlling the clinker coolers. Inspections required by this

condition shall not be performed in consecutive months. All defective bags shall be replaced.

#### **D.4.11 Broken or Failed Bag Detection**

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In the event that bag failure has been observed.

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit. If operations continue after bag failure is observed and it will be 10 days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.
- (b) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then the failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

#### **D.4.12 Visible Emissions Notations**

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- (a) Whenever a continuous opacity monitor (COM) is malfunctioning or will be down for calibration, maintenance, or repairs for a period of one (1) hour or more, and the process is operating, compliance with the applicable opacity limits shall be demonstrated by the following:
  - (1) Visible emission (VE) notations shall be performed once per hour during daylight operations following the shutdown or malfunction of the primary COM. A trained employee shall record whether emissions are normal or abnormal for the state of operation of the emission unit at the time of the reading.
    - (A) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
    - (B) If abnormal emissions are noted during two consecutive emission notations, the Permittee shall begin Method 9 opacity observations within four hours of the second abnormal notation.
    - (C) VE notations may be discontinued once a COM is online or formal Method 9 readings have been implemented.
  - (2) If a COM is not online within twenty-four (24) hours, the Permittee shall provide



certified opacity reader(s), who may be employees of the Permittee or independent contractors, to self-monitor the emissions from the emission unit stack.

- (A) Visible emission readings shall be performed in accordance with 40 CFR 60, Appendix A, Method 9, for a minimum of five (5) consecutive six (6) minute averaging periods beginning not more than twenty-four (24) hours after the start of the malfunction or down time.
  - (B) Method 9 opacity readings shall be repeated for a minimum of five (5) consecutive six (6) minute averaging periods at least once every four (4) hours during daylight operations, until such time that a COM is in operation.
  - (C) Method 9 readings may be discontinued once a COM is online.
  - (D) Any opacity exceedances determined by Method 9 readings shall be reported with the Quarterly Opacity Exceedances Reports.
- (3) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. Observation of abnormal emissions that do not violate an applicable opacity limit is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.
- (b) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous opacity monitoring system pursuant to 326 IAC 3-5, 40 CFR 63, Subpart LLL.

#### **Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

##### **D.4.13 Record Keeping Requirements**

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- (a) To document compliance with Conditions D.4.5 and D.4.6, the Permittee shall maintain records in accordance with (1) and (2) below.
  - (1) Data and results from the most recent stack test.
  - (2) All continuous emissions monitoring data.
- (b) To document compliance with Condition D.4.12, whenever visible emission readings or Method 9 opacity readings are required, the Permittee shall maintain records of the readings.
- (c) To document compliance with Condition D.4.9, the Permittee shall maintain records of the pressure drop once per day during normal operation when venting to the atmosphere:
- (d) To document compliance with Condition D.4.10, the Permittee shall maintain records of the results of the inspections required under Condition D.4.10.
- (e) To document compliance with the NESHAP 40 CFR 63, Subpart LLL, the Permittee shall maintain all records required by 40 CFR 63.1355. These records include the following:

- (1) The Permittee shall maintain files of all information (including all reports and notifications) required by 40 CFR 60.1355(a) recorded in a form suitable and readily available for inspection and review as required by 40 CFR 63.10(b)(1).
- (2) The Permittee shall maintain records for each affected source as required by 40 CFR 63.10(b)(2) and (3) including:
  - (A) All documentation supporting initial notifications and notifications of compliance status under 40 CFR 63.9.
  - (B) All records of applicability determination, including supporting analyses.
- (3) The Permittee shall maintain all records of continuous monitoring system data required by 40 CFR 63.10(c).
- (f) To document compliance with Condition D.4.4, the Permittee shall maintain records of any additional inspections prescribed by the Preventive Maintenance Plan.
- (g) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### D.4.14 Reporting Requirements

- (a) A quarterly summary of excess opacity emissions, as defined in 326 IAC 3-5-7, from the continuous monitoring system shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, within thirty (30) days after the end of the quarter being reported. The excess opacity summary shall also be submitted in accordance with 40 CFR 63.1354(8).
- (b) The Permittee shall submit a continuous monitoring system (CMS) performance report with the excess opacity summaries, in accordance with 40 CFR 63.1354(8) and 40 CFR 63, Subpart A.
- (c) The Permittee shall submit a semi-annual summary report which contains the information specified in 40 CFR 63.10(e)(3)(vi), as well as all failures to comply with any provision of the operation and maintenance plan developed in accordance with 40 CFR 63.1350(a). If the total continuous monitoring system (CMS) downtime for any CEM or any CMS for the reporting period is ten percent or greater of the total operating time for the reporting period, the Permittee shall submit an excess emissions and CMS performance report along with the summary report.
- (d) To document compliance with the NESHAP 40 CFR 63, Subpart LLL, the Permittee shall report the information required by 40 CFR 63.1354, including, but not limited to the following:
  - (1) The plan required by Condition D.4.8 shall be submitted to IDEM, OAQ and U.S. EPA by June 14, 2002, which is the compliance date for the National Emission Standards for Hazardous Air Pollutants (NESHAP) from the Portland Cement Manufacturing Industry.
  - (2) As required by 40 CFR 63.10(d)(2), the Permittee shall report the results of performance tests as part of the notification of compliance status, required in Section C - NESHAP Notification and Reporting Requirements.

- (3) As required by 40 CFR 63.10(d)(3), the Permittee shall report the opacity results from tests required by 40 CFR 63.1349.
  - (4) As required by 40 CFR 63.10(d)(5), if actions taken by the Permittee during a startup, shutdown, or malfunction of an affected source (including actions taken to correct a malfunction) are consistent with the procedures specified in the source's startup, shutdown, and malfunction plan specified in 40 CFR 63.6(e)(3), the Permittee shall state such information in a semiannual report. Reports shall only be required if a startup, shutdown, or malfunction occurred during the reporting period. The startup, shutdown, and malfunction report may be submitted simultaneously with the excess emissions and continuous monitoring system performance reports.
  - (5) Pursuant to 40 CFR 63.10(d)(5)(ii), any time an action taken by the Permittee during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) is not consistent with the procedures in the startup, shutdown, and malfunction plan, the Permittee shall report the actions taken for that event within 2 working days after commencing actions inconsistent with the plan, by telephone call to the OAQ Compliance Section at (317) 233-5674 or facsimile (FAX) transmission at (317) 233-6865. The immediate report shall be followed by a letter within 7 working days after the end of the event, certified by the Permittee, explaining the circumstances of the event, the reasons for not following the startup, shutdown, and malfunction plan, and whether any excess emissions and/or parameter monitoring exceedances are believed to have occurred.
- (e) In addition to being submitted to the address listed in Section C - General Reporting Requirements, all reports submitted pursuant to 40 CFR 60, Subpart A, or 40 CFR 63, Subpart A shall also be submitted to the U.S. EPA at the following address:

United States Environmental Protection Agency, Region V  
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590

Pursuant to 40 CFR 63.10(d)(5)(i) and (ii), the reports submitted by the Permittee shall include the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

## SECTION D.5

## FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

Insignificant Activity

### **Degreasing operations**

Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6 including one parts washer constructed in 1991;

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

### **Emission Limitations and Standards [326 IAC 2-7-5(1)]**

#### **D.5.1 Volatile Organic Compounds (VOC)**

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations) for cold cleaning operations constructed after January 1, 1980, the Permittee shall:

- (a) Equip the cleaner with a cover;
- (b) Equip the cleaner with a facility for draining cleaned parts;
- (c) Close the degreaser cover whenever parts are not being handled in the cleaner;
- (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) Provide a permanent, conspicuous label summarizing the operation requirements;
- (f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

#### **D.5.2 Volatile Organic Compounds (VOC)**

(a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), for a cold cleaner degreaser facility construction of which commenced after July 1, 1990, the Permittee shall ensure that the following control equipment requirements are met:

- (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
  - (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));
  - (B) The solvent is agitated; or
  - (C) The solvent is heated.
- (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then

the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.

- (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
- (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
- (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9°C) (one hundred twenty degrees Fahrenheit (120°F)):
  - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
  - (B) A water cover when solvent is used is insoluble in, and heavier than, water.
  - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), for a cold cleaning facility construction of which commenced after July 1, 1990, the Permittee shall ensure that the following operating requirements are met:
  - (1) Close the cover whenever articles are not being handled in the degreaser.
  - (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
  - (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

**D.5.3 Determinations of Nonapplicability [40 CFR 63.460 (Subpart T)] [40 CFR 60, Subparts A and F] [40 CFR 63, Subparts A and LLL]**

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- (a) None of the parts washers specifically listed in this section are subject to the requirements of the National Emissions Standards for Hazardous Air Pollutants (NESHAP) 326 IAC 20-1, 40 CFR 63.460 (Subpart T) because they do not utilize a solvent containing methylene chloride, perchloroethylene, trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride, or chloroform, or any combination of these halogens, in a total concentration greater than five percent by weight.
- (b) The parts washers at this source are not subject to the requirements of the New Source Performance Standards (NSPS), 40 CFR 60, Subparts A and F (Standards of Performance for Portland Cement Plants) because they are not considered affected facilities under this rule.

- (c) The parts washers at this source are not subject to the requirements of the National Emissions Standards for Hazardous Air Pollutants (NESHAP) 40 CFR 63 Subparts A and LLL, because they are not considered affected facilities under this rule.

## SECTION D.6 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]	Insignificant Activity
<b>Hazardous Waste fuel facilities</b>	
(a) Waste Management Units	
(1) Ten (10) hazardous waste-derived fuel storage tanks, installed in 1987 and 1994, with capacities ranging from 22,000-39,000 gallons. All tanks are connected to an integrated emission control system.	
(2) Carbon Steel Piping System	
(3) Tank Rail Cars and Trucks	
(b) Equipment components	
(1) Valves	
(2) Pumps	
(3) AWFCO Valves	
(c) Caps (hose end covers)	
(d) Flanges	
(e) Manways	
(f) Flame Arrestors	
(g) Filter Pots	
(h) Micro-motion Flow Meters	
(i) Level Transmitters	
(j) Pressure Indicators	
(k) Pressure Transmitters	
(l) Emergency Conservation Vent	
(m) Carbon Canister VOC Monitor	
(n) Tank Emergency Relief Ports	
(o) High Level Probes	
(p) Activated Carbon Canister System	
(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)	

## Emission Limitations and Standards [326 IAC 2-7-5(1)]

### D.6.1 General Provisions Relating to NESHAP [326 IAC 20-1][40 CFR Part 63, Subpart A]

The provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 20-1, apply to the facilities described in this section except when otherwise specified in 40 CFR Part 63, Subpart DD, Table 2.

### D.6.2 General Provisions Relating to NESHAP [326 IAC 14-1][40 CFR Part 61, Subpart A]

The provisions of 40 CFR Part 61, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 14-1, apply to the facilities described in this section except when otherwise specified in 40 CFR Part 61, Subpart FF and 40 CFR Part 61, Subpart V.

### D.6.3 Off-site Waste and Recovery Operations NESHAP [326 IAC 20-23-1] [40 CFR Part 63, Subpart DD] [40 CFR 61, Subpart FF]

These facilities are subject to 40 CFR Part 63, Subpart DD, which is incorporated by reference as

326 IAC 20-23-1, with a compliance date of February 1, 2000.

- (a) Pursuant to 40 CFR 63.680(b)(2)(vi), off-site materials that meet the exemption criteria and are managed at the Permittee's facility in units (tanks, containers (tank rail cars and trucks), and transfer systems (piping system)), are exempt from the requirements of controlling air emissions in accordance with 40 CFR 63.683 through 63.689.
- (b) Pursuant to 40 CFR 63.683(b)(1)(i), the Permittee shall control the air emissions from each affected off-site material management unit (tanks, containers (tank rail cars and trucks), and transfer systems (piping system)) in accordance with the provisions listed below:
  - (1) Pursuant to 40 CFR 63.683(b)(2)(i), if the off-site material management units, identified as (a) in the description box in this Section, are subject to 40 CFR 61, Subpart FF and the Permittee is controlling the HAPs listed in 40 CFR Part 63, Subpart DD, Table 1 that are emitted from the unit in compliance with the provisions specified in 40 CFR Part 61, Subpart FF, the off-site material management units are exempt from the requirements of controlling air emissions in accordance with 40 CFR 63.685 through 63.689.
  - (2) Pursuant to 40 CFR 63.689(c)(2) and 40 CFR 63.683(b)(1)(i), the Permittee shall control air emissions by operating a transfer system, identified as (a)(3) in the description box in this section, that consists of continuous hard-piping. All joints or seams between the pipe sections shall be permanently or semi-permanently sealed (e.g., a welded joint between two sections of metal pipe or a bolted and gasketed flange).
- (c) Pursuant to 40 CFR 63.683(d), the Permittee shall control equipment leaks from each equipment component, identified as (b) in the description box in this section, that is part of the affected source specified in 40 CFR 63.680(c)(3) by implementing leak detection and control measures in accordance with the standards specified in 40 CFR 63.691(b) and condition D.6.4 and D.6.5.

D.6.4 National Emission Standard for Equipment Leaks (Fugitive Emission Sources)[326 IAC 14-8-1][40 CFR 61, Subpart V] [40 CFR 63, Subpart DD]

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Pursuant to 40 CFR 63.683(d) and 40 CFR 63.691(b)(1), the Permittee shall control the HAPs emitted from equipment leaks in accordance with 40 CFR 61, Subpart V - National Emission Standard for Equipment Leaks (Fugitive Emission Sources), Sections 61.242 through 61.247. The provisions apply to each equipment component that is part of the affected source, including components related to hazardous waste fuel facilities, that meet the criteria specified in 40 CFR 63.680(c)(3).

- (a) Pursuant to 40 CFR 61.242-1(d), each piece of equipment to which this subpart applies shall be marked in such a manner that it can be distinguished readily from other pieces of equipment.
- (b) Pursuant to 40 CFR 61.242-4 (Standards: Pressure relief devices in gas/vapor service), the standards listed below apply to pressure relief devices in gas/vapor service:
  - (1) Except during pressure releases, each pressure relief device in gas/vapor service shall be operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as measured by the method specified in 40 CFR 61.245(c).

- (2) The following requirements apply regarding pressure releases:
  - (A) After each pressure release, the pressure relief device shall be returned to a condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in 40 CFR 61.242-10 and Condition D.6.5(e); and,
  - (B) No later than 5 calendar days after the pressure release, the pressure relief device shall be monitored in accordance with condition D.6.5(b).
- (3) Any pressure relief device that is equipped with a closed-vent system capable of capturing and transporting leakage from the pressure relief device to a control device as described in 40 CFR 61.242-11 and paragraph (f) of this condition is exempt from the requirements of paragraphs (b)(1) and (2) of this condition.
- (c) Pursuant to 40 CFR 61.242-5 (Standards: Sampling connecting systems), the standards listed below apply to sampling connecting systems:
  - (1) Each sampling connection system shall be equipped with a closed-purge system, closed-loop system, or closed vent system.
  - (2) Each closed-purge system, closed-loop system, or closed-vent system as required in paragraph (c)(1) shall comply with one of the following requirements:
    - (A) Return the purged process fluid directly to the process line; or
    - (B) Collect and recycle the purged process fluid; or
    - (C) Be designed and operated to capture and transport all the purged process fluid to a control device that complies with 40 CFR 61.242-11; or
    - (D) Collect, store and transport the following purged process fluid to any of the systems or facilities listed in 40 CFR 61.242-5(b)(4)(i) through (iii).
- (d) Pursuant to 40 CFR 61.242-6 (Standards: Open-ended valves or lines), the standards listed below apply to open-ended valves or lines:
  - (1) Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in paragraph (d)(4) of this condition.
  - (2) The cap, blind flange, plug, or second valve shall seal the open end at all times except during operations requiring process fluid flow through the open-ended valve or line.
  - (3) Each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed.
  - (4) When a double block and bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall comply with paragraph (d)(1) of this condition at all other times.



- (e) Pursuant to 40 CFR 61.242-9 (Standards: Product accumulator vessels), each product accumulator vessel shall be equipped with a closed-vent system capable of capturing and transporting any leakage from the vessel to the activated carbon canister system.
- (f) Pursuant to 40 CFR 61.242-11 (Standards: Closed-vent systems and control devices), the Permittee shall comply with the provisions of this paragraph for the closed-vent system and activated carbon canister system:
  - (1) The activated carbon canister system shall be designed and operated to recover the organic vapors vented to them with an efficiency of 95 percent or greater.
  - (2) Closed-vent systems shall be designed for and operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background and by visual inspections, as determined by the methods specified in 40 CFR 61.245(c).
  - (3) The closed-vent system and activated carbon canister system shall be operated at all times when emissions may be vented to them.

D.6.5 Monitoring Procedures for Equipment Leaks [326 IAC 2-7-6(1)] [40 CFR 61, Subpart V]  
[40 CFR 63, Subpart DD]

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Pursuant to 40 CFR 61, Subpart V, the Permittee must conduct monitoring in accordance with the paragraphs listed below to comply with leak detection requirements:

- (a) Pursuant to 40 CFR 61.242-2, the following standards apply to pumps:
  - (1) Each pump shall be monitored monthly to detect leaks by the methods specified in 40 CFR 61.245(b), except as specified in paragraphs (a)(1)(A) or (a)(1)(B) of this condition.
    - (A) Each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from Condition D.6.5 provided that the requirements of 40 CFR 61.242-2(d)(1) through (d)(6) are met, as applicable.
    - (B) Each pump that is designated, as described in 40 CFR 61.246(e)(2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from Condition D.6.5 provided that the requirements of 40 CFR 61.242-2(e)(1) through (e)(3) are met, as applicable.
  - (2) Each pump shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal.
  - (3) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.
  - (4) If there are indications of liquids dripping from the pump seal, a leak is detected.
  - (5) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after each leak is detected, except as provided in 40 CFR 61.242-10 and paragraph (e) of this condition.
  - (6) A first attempt at repair shall be made no later than 5 calendar days after each

leak is detected.

- (b) Pursuant to 40 CFR 61.242-4(b)(2), no later than 5 calendar days after a pressure release, the pressure relief device in gas/vapor service shall be monitored to confirm the condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as measured by the method specified in 40 CFR 61.245(c).
- (c) Pursuant to 40 CFR 61.242-7, the standards listed below apply to valves:
  - (1) Each valve shall be monitored monthly to detect leaks by the method specified in 40 CFR 61.245(b).
  - (2) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.
  - (3) Any valve for which a leak is not detected for 2 successive months may be monitored the first month of every quarter, beginning with the next quarter, until a leak is detected.
  - (4) If a leak is detected, the valve shall be monitored monthly until a leak is not detected for 2 successive months.
  - (5) When a leak is detected it shall be repaired as soon as practicable, but not later than 15 calendar days after the leak is detected, except as provided in 40 CFR 61.242-10 and paragraph (e) of this condition.
  - (6) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.
  - (7) First attempts at repair include, but are not limited to, the following best practices where practicable:
    - (A) Tightening of bonnet bolts;
    - (B) Replacement of bonnet bolts;
    - (C) Tightening of packing gland nuts; and,
    - (D) Injection of lubricant into lubricated packing.
- (d) Pursuant to 40 CFR 61.242-8, pressure relief devices in liquid service and flanges and other connectors shall be monitored within 5 days by the method specified in 40 CFR 61.245(b) if evidence of a potential leak is found by visual, audible, olfactory, or any other detection method.
  - (1) Each pump shall be monitored monthly to detect leaks by the methods specified in 40 CFR 61.245(b), except as specified in paragraphs (a)(1)(A) or (a)(1)(B) of this condition.
    - (A) Each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from Condition D.6.5 provided that the requirements of 40 CFR 61.242-2(d)(1) through (d)(6) are met, as applicable.

- (B) Each pump that is designated, as described in 40 CFR 61.246(e)(2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from Condition D.6.5 provided that the requirements of 40 CFR 61.242-2(e)(1) through (e)(3) are met, as applicable.
- (2) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 40 CFR 61.242-10 and paragraph (e) of this condition.
- (3) The first attempt at repair shall be made no later than 5 calendar days after each leak is detected.
- (4) First attempts at repair include, but are not limited to, the best practices described under 40 CFR 61.242-7(e) and paragraph (c)(7) of this condition.
- (e) Pursuant to 40 CFR 61.242-10 (Standards: Delay of Repair), the standards listed below apply to delay of repair of equipment:
  - (1) Delay of repair of equipment for which leaks have been detected will be allowed if the repair is technically infeasible without a process unit shutdown. Repair of this equipment shall occur before the end of the next process unit shutdown.
  - (2) Delay of repair of equipment for which leaks have been detected will be allowed for equipment that is isolated from the process that does not remain in VHAP service.
  - (3) Delay of repair for valves will be allowed if:
    - (A) The Permittee demonstrates that emissions of purged material resulting from immediate repair are greater than the fugitive emissions likely to result from delay of repair; and,
    - (B) When repair procedures are effected, the purged material is collected and destroyed or recovered in the a control device complying with 40 CFR 61.242-11.
  - (4) Delay of repair for pumps will be allowed if:
    - (A) Repair requires the use of a dual mechanical seal system that includes a barrier fluid system; and
    - (B) Repair is completed as soon as practicable, but not later than 6 months after the leak was detected.
  - (5) Delay of repair beyond a process unit shutdown will be allowed for a valve if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the next process unit shutdown will not be allowed unless the next process unit shutdown occurs sooner than 6 months after the first process unit shutdown.
- (f) Pursuant to 40 CFR 61.242-11(e), the Permittee shall monitor the activated carbon canister system to ensure that it is operated and maintained in conformance with its design.

- (g) Pursuant to 40 CFR 61.242-11(f), the monitoring requirements listed below apply to the closed-vent system.
  - (1) Closed-vent systems shall be monitored to determine compliance with 40 CFR 61.242-11 initially in accordance with 40 CFR 61.245(b), annually, and at other times requested by the US EPA or IDEM, OAQ.
  - (2) Leaks, as indicated by an instrument reading greater than 500 ppmv above background or visual inspections, shall be repaired as soon as practicable, but not later than 15 calendar days after the leak is detected except as provided in (g)(3)(A) of this condition.
  - (3) A first attempt at repair shall be made no later than 5 calendar days after the leak is detected.

D.6.6 National Emission Standard for Benzene Waste Operations [40 CFR Part 61, Subpart FF]

Pursuant to 40 CFR 61.342(b), the Permittee shall manage each waste stream that contains benzene meeting the criteria specified in 40 CFR 61.340(b) in accordance with 40 CFR 61, Subpart FF - National Emissions Standard for Benzene Waste Operations, paragraphs 61.342(c) through (h).

- (a) Pursuant to 40 CFR 61.342(c)(1)(ii), the Permittee shall control air emissions from each tank in accordance with the applicable standards specified in 40 CFR 61.343(a). Pursuant to 40 CFR 61.343(a)(1), each tank shall be covered by a fixed roof and vented through a closed-vent system that routes all organic vapors vented from the tank to an activated carbon canister system in accordance with items (1) through (4) below.
  - (1) The cover and all openings shall be designed to operate with no detectable emissions, as indicated by an instrument reading of less than 500 ppmv above background, in accordance with 40 CFR 61.355(h) and condition D.6.12(c).
  - (2) Each opening shall be maintained in a closed, sealed position at all times that waste is in the tank except when it is necessary to use the opening for waste sampling or removal, or for equipment inspection, maintenance, or repair.
  - (3) Condition D.6.6(a)(2) does not apply if the cover and closed-vent system operate such that the tank is maintained at a pressure less than atmospheric pressure and the opening meets the following conditions:
    - (A) The purpose of the opening is to provide dilution air to reduce the explosion hazard,
    - (B) The opening is designed to operate with no detectable emissions, as indicated by an instrument reading of less than 500 ppmv above background, in accordance with 40 CFR 61.355(h) and condition D.6.12(c), and
    - (C) The pressure is monitored continuously to ensure that the pressure in the tank remains below atmospheric pressure.
  - (4) The closed-vent system and activated carbon canister system shall be designed to operate in accordance with 40 CFR 61.349 and condition D.6.7.

- (b) Pursuant to 40 CFR 61.342(c)(1)(ii), the Permittee shall control air emissions from each container in accordance with the applicable standards specified in 40 CFR 61.345.
  - (1) The Permittee shall install, operate, and maintain a cover on each container used to handle, transfer, or store waste in accordance with the following requirements:
    - (A) The cover and all openings shall be designed to operate with no detectable emissions, as indicated by an instrument reading of less than 500 ppmv above background, in accordance with 40 CFR 61.355(h) and condition D.6.12(c).
    - (B) Each opening shall be maintained in a closed, sealed position when waste is in the container, except when it is necessary to use the opening for waste loading, removal, inspection, or sampling, except as provided in D.6.6(b)(4).
  - (2) When transferring waste into a container by pumping, the Permittee shall perform the transfer using a submerged fill pipe as specified in 40 CFR 61.345(a)(2).
  - (3) Treatment of waste in a container as specified in 40 CFR 61.345(a)(3) shall route all organic vapors vented from the container through a closed-vent system to the activated carbon canister system.
    - (A) The cover and all openings shall be designed to operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppmv above background, in accordance with 40 CFR 61.355(h) and condition D.6.12(c).
    - (B) The closed-vent system and activated carbon canister system shall be designed to operate in accordance with 40 CFR 61.349 and condition D.6.7.
  - (4) Condition D.6.8(b)(1)(B) and D.6.8(b)(2) do not apply if the cover and closed-vent system operate such that the container is maintained at a pressure less than atmospheric pressure and the opening meets the following conditions:
    - (A) The purpose of the opening is to provide dilution air to reduce the explosion hazard,
    - (B) The opening is designed to operate with no detectable emissions, as indicated by an instrument reading of less than 500 ppmv above background, in accordance with 40 CFR 61.355(h) and condition D.6.12(c), and
    - (C) The pressure is monitored continuously to ensure that the pressure in the tank remains below atmospheric pressure.

**D.6.7 Standards: Closed-Vent Systems and Activated Carbon Canister System [40 CFR Part 61, Subpart FF] [40 CFR 61.349]**

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The provisions of 40 CFR 61.349 apply to the closed-vent system and the activated carbon canister system used to control air emissions from the tanks and containers with conditions for which 40 CFR 61.343(a) and 61.345(a)(3) applies. The Permittee shall meet the requirements specified in items (a) and (b) below:

- (a) Pursuant to 40 CFR 61.349(a), the Permittee shall meet the following requirements for the closed-vent system and activated carbon canister system used to comply with 40 CFR 61.343 and 61.345:
  - (1) The Permittee shall properly design, install, operate, and maintain the closed-vent system in accordance with the following requirements:
    - (A) The closed-vent system shall be designed to operate with no detectable emissions as indicated by an instrument reading of less than 500 ppmv above background in accordance with 40 CFR 61.355(h) and condition D.6.12(c).
    - (B) Vent systems that contain a bypass line shall install, maintain, and operate according to manufacturer's specifications a flow indicator as specified in 61.349(a)(1)(ii).
    - (C) All gauging and sampling devices shall be gas-tight except when gauging or sampling is taking place.
    - (D) Devices use by the closed-vent system that vent directly to the atmosphere shall remain in a closed, sealed position during normal operations except when the device needs to open to prevent physical damage or permanent deformation of the closed-vent system resulting from malfunction of the unit in accordance with good engineering and safety practices for handling flammable, explosive, or other hazardous materials.
  - (2) Pursuant to 40 CFR 61.349(a)(2)(ii), the Permittee shall maintain an activated carbon canister system designed and operated to control the organic emissions vented to it with an efficiency of 95 weight percent or greater.
- (b) Pursuant to 40 CFR 61.349(b), the closed-vent system and activated carbon canister shall be operated at all times when waste is placed in the waste management unit vented to the control device except when maintenance or repair of the waste management unit cannot be completed without a shutdown of the control device.
- (c) Pursuant to 40 CFR 61.349(a)(2), a control device shall be designed and operated in accordance with 40 CFR 61.349(a)(2)(i) through (a)(2)(iv), as applicable.

**D.6.8 Monitoring Procedures for Tanks [326 IAC 2-7-6(1)] [40 CFR 61, Subpart FF]**

The Permittee shall inspect and repair defects for each tank in which the waste stream is placed as follows:

- (a) Pursuant to 40 CFR 61.343(c), the Permittee shall inspect each fixed-roof, seal, access door, and all other openings by visual inspection initially and quarterly thereafter to ensure no cracks or gaps occur and that access doors and other openings are closed and gasketed properly.
- (b) The Permittee shall repair all detected defects, in accordance with 40 CFR 61.343(d) and 40 CFR 61.350, as follows:
  - (1) The Permittee shall make a first effort to repair broken seals or gaskets or other problems identified as soon as practicable, but not later than 45 calendar days

after identification.

- (2) Repair of defects may be delayed beyond 45 calendar days if completion of the repair is technically impossible without a complete or partial facility or unit shutdown. Repair of such equipment shall occur before the end of the next facility or unit shutdown.

**D.6.9 Monitoring Procedures for Containers [326 IAC 2-7-6(1)] [40 CFR 61, Subpart FF]**

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- (a) Pursuant to 40 CFR 61.345(b), the Permittee shall visually inspect each cover and all openings initially and quarterly thereafter to ensure that they are closed and gasketed properly.
- (b) The Permittee shall repair all detected defects, in accordance with 40 CFR 61.345(c) and 40 CFR 61.350, as follows:
  - (1) The Permittee shall make a first effort to repair broken seals or gaskets or other problems identified as soon as practicable, but not later than 15 calendar days after identification.
  - (2) Repair of defects may be delayed beyond 15 calendar days if completion of the repair is technically impossible without a complete or partial facility or unit shutdown. Repair of such equipment shall occur before the end of the next facility or unit shutdown.

**D.6.10 Monitoring Procedures for Activated Carbon Canister System and Closed-Vent System [326 IAC 2-7-6(1)] [40 CFR 61, Subpart FF]**

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- (a) Pursuant to 40 CFR 61.349(h) and 40 CFR 61.354(d), the Permittee shall ensure that the activated carbon canister system operates properly in accordance with the performance specifications in D.6.7 by monitoring the activated carbon canister system in accordance with all of the following requirements:
  - (1) The Permittee shall install and operate a device to monitor the concentration level of the organic compounds in the exhaust vent stream from the activated carbon canister system on a regular schedule.
  - (2) Existing carbon shall be replaced with fresh carbon immediately when carbon breakthrough is indicated.
  - (3) The device shall be monitored on a daily basis.
  - (4) The monitoring system shall be installed, calibrated, maintained, and operated according to the manufacturer's specifications.
- (b) If a bypass line is installed, the Permittee shall visually inspect the bypass line valve at least once every month to ensure that the valve is maintained in the closed position and readings from the flow monitoring device at least once each operating day as specified in 40 CFR 61.354(f) and condition D.6.7.
- (c) The Permittee using a system for emission control that is maintained at a pressure less than atmospheric pressure shall monitor the pressure with a device equipped with a continuous recorder as specified in 40 CFR 61.354(g).
- (d) The closed-vent system and the activated carbon canister system shall be visually

inspected quarterly in accordance with 40 CFR 61.349(f).

- (e) The Permittee shall repair all detected defects, in accordance with 40 CFR 61.349(g) and 40 CFR 61.350, as follows:
  - (1) The Permittee shall make a first effort to repair the closed-vent system and activated carbon canister system as soon as practicable, but no later than 5 calendar days after detection and repair shall be completed no later than 15 calendar days after detection.
  - (2) Repair of defects may be delayed beyond 15 calendar days if completion of the repair is technically impossible without a complete or partial facility or unit shutdown. Repair of such equipment shall occur before the end of the next facility or unit shutdown.

D.6.11 Startup, Shutdown, and Malfunction Plan [40 CFR 63.6(e)(3) General Provisions]

Pursuant to 40 CFR 63, Subpart DD, the Permittee shall develop and implement a written startup, shutdown, and malfunction (SSM) plan that describes, in detail, procedures for operating and maintaining the source during periods of startup, shutdown, and malfunction and a program of corrective action for malfunctioning process and air pollution control equipment used to comply with 40 CFR 63, Subpart DD. As required under 40 CFR 63.8(c)(1)(i) (General Provisions), the plan shall identify all routine or otherwise predictable continuous monitoring system (CMS) malfunctions. The plan shall be incorporated by reference into the source's Part 70 permit.

- (a) The purpose of the SSM plan is to:
  - (1) Ensure that, at all times, the Permittee operates and maintains each facility, including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions at least to the level required by the rule;
  - (2) Ensure that the Permittee is prepared to correct malfunctions as soon as practicable after their occurrence in order to minimize excess emissions of HAP; and
  - (3) Reduce the reporting burden associated with periods of startup, shutdown, and malfunction (including corrective action taken to restore malfunctioning process and air pollution control equipment to its normal or usual manner of operation).
- (b) During periods of startup, shutdown, and malfunction, the Permittee shall operate and maintain each facility (including associated air pollution control equipment) in accordance with the procedures specified in the SSM plan developed under this condition.
- (c) The Permittee shall keep the written SSM plan on record after it is developed to be made available for inspection, upon request, by IDEM, OAQ for the life of the facility or until the facility is no longer subject to this rule. In addition, if the SSM plan is revised, the Permittee shall keep previous (i.e., superseded) versions of the SSM plan on record, to be made available for inspection, upon request, by IDEM, OAQ, for a period of 5 years after each revision to the plan. Revisions to the SSM plan are automatically incorporated by reference and do not require a permit revision.
- (d) To satisfy the requirements of this condition, the Permittee may use the facility's standard operating procedures (SOP) manual, or an Occupational Safety and Health Administration



(OSHA) or other plan, provided the alternative plans meet all the requirements of this condition and are made available for inspection when requested by IDEM, OAQ.

- (e) IDEM, OAQ shall determine whether acceptable operation and maintenance procedures are being used, based on information available to IDEM, OAQ, which may include, but is not limited to, monitoring results, review of operation and maintenance procedures (including the SSM plan required in this condition), review of operation and maintenance records, and inspection of the facility.

Based on the results of such determination, IDEM, OAQ may require that the Permittee make changes to the SSM plan for the source. IDEM, OAQ may require reasonable revisions to a SSM plan, if IDEM, OAQ finds that the plan:

- (1) Does not address a startup, shutdown, or malfunction event that has occurred;
  - (2) Fails to provide for the operation of the facility (including associated air pollution control equipment) during a startup, shutdown, or malfunction event in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels required by all relevant standards; or
  - (3) Does not provide adequate procedures for correcting malfunctioning process and/or air pollution control equipment as quickly as practicable.
- (f) If the SSM plan fails to address or inadequately addresses an event that meets the characteristics of a malfunction but was not included in the SSM plan at the time the Permittee developed the plan, the Permittee shall revise the SSM plan within forty-five (45) days after the event to include detailed procedures for operating and maintaining the facility during similar malfunction events and a program of corrective action for similar malfunctions of process or air pollution control equipment.

### **Compliance Determination Requirements**

#### **D.6.12 Leak Detection Testing Requirements [326 IAC 2-7-6(1)] [40 CFR 61, Subpart FF]**

- (a) When equipment is tested for compliance with or monitored for no detectable emissions in accordance with the standard for pressure relief devices in 40 CFR 61.242-4 and closed-vent system in 40 CFR 61.242-11, the Permittee shall comply with the requirements in 40 CFR 61.245(c).
- (b) Pursuant to 40 CFR 61.242-1(b), compliance with 40 CFR 61, Subpart V, will be determined by a review of records, review of performance test results, and inspection using the methods and procedures specified in 40 CFR 61.245.
- (c) Pursuant to 40 CFR 61, Subpart FF, the Permittee must demonstrate no detectable emissions from the cover and all openings in waste management units by performing a test in accordance with 40 CFR 61.355(h) at least once per year.

#### **D.6.13 Activated Carbon Canister System Compliance Determination Requirements [326 IAC 2-7-6(1)] [40 CFR 61, Subpart FF]**

Pursuant to 40 CFR 61.349(c)(1), the Permittee shall demonstrate that the activated carbon canister system achieves the conditions specified in 40 CFR 61.349(a)(2)(ii) and D.6.7(a)(2) by performing a design analysis that includes the items specified in 61.356(f)(2) and as follows:

- (a) Pursuant to 40 CFR 61.356(f)(2)(i), the design analysis shall include, but is not limited to,

specifications, drawings, schematics, and piping and instrumentation diagrams prepared by the Permittee, or the control device manufacturer or vendor that describe the activated carbon canister system design based on acceptable engineering texts; and

- (b) The design analysis shall address the vent stream composition, constituent concentration, flow rate, relative humidity, and temperature. The design analysis shall also establish the design exhaust vent stream organic compound concentration level, capacity of carbon bed, type and working capacity of activated carbon used for carbon bed, and the total carbon working capacity of the control device and source operating schedule.
- (c) Pursuant to 40 CFR 61.342(g), compliance with 40 CFR 61, Subpart FF will be determined by review of facility records and results from tests and inspections using methods and procedures specified in 40 CFR 61.355.

#### **Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19][40 CFR 63]**

##### **D.6.14 General Record Keeping Requirements [40 CFR 63, Subpart A] [40 CFR 63, Subpart DD][40 CFR 61, Subpart FF]**

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- (a) Pursuant to 40 CFR 63.696(a), the Permittee shall comply with the record keeping requirements in 40 CFR 63.10, under 40 CFR 63 Subpart A (General Provisions), that are applicable to 40 CFR 63, Subpart DD, as specified in Table 2 of Subpart DD.
- (b) Pursuant to 40 CFR 63.6(e)(3), to document compliance with the SSM Plan requirement, the Permittee shall comply with the following record keeping requirements:
  - (1) When actions taken by the Permittee during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) are consistent with the procedures specified in the SSM Plan, the Permittee shall keep records for that event in accordance with 40 CFR 63.6(e)(3)(iii).
  - (2) If an action taken by the Permittee during a startup, shutdown, or malfunction (including an action taken to correct a malfunction) is not consistent with the procedures specified in the SSM Plan, the Permittee shall record the actions taken for that event in accordance with 40 CFR 63.6(e)(3)(iv).
- (c) Pursuant to 40 CFR 61.356(b), the Permittee shall maintain records that identify each waste stream at the facility subject to 40 CFR 61, Subpart FF, and indicate whether or not the waste stream is controlled for benzene emissions in accordance with 40 CFR 61, Subpart FF.
- (d) Pursuant to 40 CFR 61.356(b)(1), for each waste stream not controlled for benzene emissions in accordance with 40 CFR 61, Subpart FF, the Permittee shall keep records that include all test results, measurements, calculations, and other documentation used to determine the following information for the waste stream: waste stream identification, water content, whether or not the waste stream is a process wastewater stream, annual waste quantity, range of benzene concentrations, annual average flow-weighted benzene concentration, and annual benzene quantity.
- (e) Pursuant to 40 CFR 61.356(a), the Permittee shall maintain each record in accordance with Section C - General Record Keeping Requirements.

##### **D.6.15 Record Keeping Requirements for Equipment Leaks [40 CFR 63, Subpart DD] [40 CFR 61, Subpart**

V]

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Pursuant to 40 CFR 61.246, the Permittee shall comply with the following record keeping requirements:

- (a) The Permittee may comply with the record keeping requirements for the process units in one record keeping system if the system identifies each record by each process unit.
- (b) When each leak is detected as specified in 40 CFR 61, Sections 242-2, 242-7, and 242-8 and in condition D.6.5, the following requirements apply:
  - (1) A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment.
  - (2) The identification on a valve may be removed after it has been monitored for 2 successive months as specified in 40 CFR 61.242-7(c) and condition D.6.5 and no leak has been detected during those 2 months.
  - (3) The identification on equipment, except on a valve, may be removed after it has been repaired.
- (c) When each leak is detected as specified in 40 CFR 61, Sections 242-2, 242-7, and 242-8 and in condition D.6.5, the following information shall be recorded in a log and shall be kept for 2 years in a readily accessible location:
  - (1) The instrument and operator identification numbers and the equipment identification number;
  - (2) The date the leak was detected and the dates of each attempt to repair the leak;
  - (3) Repair methods applied in each attempt to repair the leak;
  - (4) "Above 10,000" if the maximum instrument reading measured by the methods specified in 40 CFR 61.245(a) after each repair attempt is equal to or greater than 10,000 ppm.
  - (5) "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak;
  - (6) The signature of the Permittee (or designate) whose decision it was that the repair could not be effected without a process shutdown;
  - (7) The expected date of successful repair of the leak if a leak is not repaired within 15 calendar days;
  - (8) Dates of process unit shutdowns that occur while the equipment is unrepaired; and,
  - (9) The date of successful repair of the leak.
- (d) The following information pertaining to the design requirements for the closed-vent system and activated carbon canister system shall be recorded and kept in a readily accessible location:

- (1) Detailed schematics, design specifications, and piping and instrumentation diagrams;
  - (2) The dates and descriptions of any changes in the design specifications;
  - (3) A description of the parameter or parameters monitored, as required in 40 CFR 61.242-11(e) and condition D.6.5, to ensure that the activated carbon canister system is operated and maintained in conformance with its design and an explanation of why that parameter (or parameters) was selected for the monitoring;
  - (4) Periods when the closed-vent system and activated carbon canister system are not operated as designed; and,
  - (5) Dates of startups and shutdowns of the closed-vent system and activated carbon canister system.
- (e) The following information pertaining to all equipment to which a standard applies shall be recorded in a log that is kept in a readily accessible location:
- (1) A list of identification numbers for equipment (except welded fittings) subject to the requirements of 40 CFR 61, Subpart V;
  - (2) A list of identification numbers for equipment that the Permittee elects to designate for no detectable emissions as indicated by an instrument reading of less than 500 ppm above background. The designation of this equipment for no detectable emissions shall be signed by the Permittee;
  - (3) A list of equipment identification numbers for pressure relief devices required to comply with 40 CFR 61.242-4(a) and condition D.6.4(b); and,
  - (4) The following information for each compliance test required in 40 CFR 61.242-4 and condition D.6.4(b):
    - (A) The dates of each compliance test required in 40 CFR 61.242-4 and condition D.6.4(b);
    - (B) The background level measured during each compliance test; and,
    - (C) The maximum instrument reading measured at the equipment during each compliance test.
- (f) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.6.16 Record Keeping Requirements for Tanks and Containers [40 CFR 61, Subpart FF]

- (a) Pursuant to 40 CFR 61.356(d), the Permittee shall maintain engineering design documentation for all control equipment that is installed on the waste management unit. The documentation shall be retained for the life of the control equipment.
- (b) Pursuant to 40 CFR 61.356(g), the Permittee shall maintain the following records:
  - (1) For tanks using a fixed roof to comply with the tank control requirements specified in 40 CFR 61.343(a) and condition D.6.6(a), a record of each visual inspection

required by 40 CFR 61.343(c) and condition D.6.8 that identifies a problem (such as a broken seal, gap or other problem) which could result in benzene emissions.

- (2) For containers using a cover to comply with the container control requirements specified in 40 CFR 61.345(a) and condition D.6.6(b), a record of each visual inspection required by 40 CFR 61.345(b) and condition D.6.9 that identifies a problem (such as a broken seal, gap or other problem) which could result in benzene emissions.
- (3) Each record required by paragraphs (1) and (2) shall include the date of the inspection, waste management unit and control equipment location where the problem is identified, a description of the problem, a description of the corrective action taken, and the date the corrective action was completed.
- (c) The Permittee shall maintain a record of each test of no detectable emissions required by 40 CFR 61.343(a), 40 CFR 61.345(a), condition D.6.6(a), and condition D.6.6(b) as specified in 40 CFR 61.356(h).
- (d) Pursuant to 40 CFR 61.356(m), if the cover and closed-vent system operate such that the tank or container is maintained at a pressure less than atmospheric pressure as allowed in condition D.6.6 then the Permittee shall maintain records of all periods during which the pressure in the unit is operated at a pressure greater than atmospheric pressure.
- (e) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

**D.6.17 Record Keeping Requirements for Activated Carbon Canister System and Closed-Vent System [40 CFR 61, Subpart FF]**

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- (a) Pursuant to 40 CFR 61.356(f), the Permittee shall maintain the following records for the closed-vent and activated carbon canister system for the life of the system:
  - (1) A statement, signed and dated by the Permittee, certifying that the closed-vent system and activated carbon canister system is designed to operate at the documented performance level when the waste management unit vented to the activated carbon canister system is or would be operating at the highest load or capacity expected to occur.
  - (2) For the activated carbon canister system, records of the design analysis required in condition D.6.13.
- (b) The Permittee shall maintain a record for each visual inspection required by 40 CFR 61.343 and 61.345 that identifies a problem (such as a broken seal, gap or other problem) which could result in benzene emissions as specified in 40 CFR 61.356(g).
- (c) The Permittee shall maintain a record of each test of no detectable emissions required by 40 CFR 61.349(a) and condition D.6.7(a) as specified in 40 CFR 61.356(h).
- (d) Pursuant to 40 CFR 61.356(j), the Permittee shall maintain documentation that includes the following information regarding the control device operation:
  - (1) Dates of startup and shutdown of the closed-vent system and activated carbon canister system.

- (2) A description of the operating parameters to be monitored as specified in 40 CFR 61.356 (j)(2). This documentation shall be kept for the life of the control device.
  - (3) Pursuant to 40 CFR 61.356(j)(3), periods when the closed-vent system and activated carbon canister system are not operated as designed including all periods and the duration when any valve car-seal or closure mechanism is broken or the by-pass line valve has changed and when the flow monitoring devices indicate that vapors are not routed to the control device as required.
  - (4) Records from the monitoring device of the concentration of organics in the activated carbon canister system outlet gas stream as specified in 40 CFR 61.356(j)(9).
  - (5) Records of the dates and times when the activated carbon canister system is monitored, when breakthrough is measured, and the date and time the existing carbon is replaced with fresh carbon as specified in 40 CFR 61.356(j)(10).
- (d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.6.18 Reporting Requirements [40 CFR 63, Subpart A] [40 CFR 63, Subpart DD]  
[40 CFR 61, Subpart V]

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- (a) Pursuant to 40 CFR 63.697(a), the Permittee shall submit reports to the US EPA and IDEM, OAQ in accordance with the applicable reporting requirements in 40 CFR 63.10 as specified in Table 2 of 40 CFR 63, Subpart DD.
- (b) Pursuant to 40 CFR 63.697(b), the Permittee shall submit to the US EPA and IDEM, OAQ startup, shutdown, and malfunction reports specified in 40 CFR 63.10(d)(5). If actions taken by the Permittee during a startup, shutdown, or malfunction of an affected source (including actions taken to correct a malfunction) are not completely consistent with the procedures specified in the source's startup, shutdown, and malfunction plan specified in 40 CFR 63.6(e)(3), the Permittee shall state such information in the report. The startup, shutdown, or malfunction report shall consist of a letter, containing the name, title, and signature of the responsible official who is certifying its accuracy.
- (c) Pursuant to 40 CFR 61.247, the Permittee shall comply with the reporting requirements of this paragraph. A report shall be submitted to the US EPA and IDEM, OAQ semi-annually, that includes the following information:
  - (1) Process unit identification;
  - (2) For each month during the semi-annual reporting period:
    - (A) Number of valves for which leaks were detected as described in 40 CFR 61.242-7(b) and condition D.6.5(c)(2);
    - (B) Number of valves for which leaks were not repaired as required in 40 CFR 61.242-7(d) and condition D.6.5(c)(5);
    - (C) Number of pumps for which leaks were detected as described in 40 CFR 61.242-2(b) and condition D.6.5(a)(3) and (4);
    - (D) Number of pumps for which leaks were not repaired as required in 40 CFR

61.242-2(c) and condition D.6.5(a)(5) and (6); and,

(E) The facts that explain any delay of repairs and, where appropriate, why a process unit shutdown was technically infeasible.

- (3) Dates of process unit shutdowns which occurred within the semi-annual reporting period;
- (4) Revisions to items reported according to the initial report required by 40 CFR 61.247(a)(1) if changes have occurred since the initial report or subsequent revisions to the initial report; and,
- (5) The results of all performance tests and monitoring to determine compliance with no detectable emissions conducted within the semi-annual reporting period.

D.6.19 Reporting Requirements [40 CFR 61, Subpart FF]

- (a) Pursuant to 40 CFR 61.357, the Permittee shall submit to the US EPA and IDEM, OAQ an annual report containing the following information:
  - (1) Information updating the report originally submitted pursuant to 40 CFR 61.357 (a)(1) through (a)(3), or a statement that the information has not changed from the following year as specified in 40 CFR 61.357(d)(2).
  - (2) Summary of all inspections required by condition D.6.8 and D.6.9 during which detectable were measure or a problem that could result in benzene emissions was identified, including information about the repairs or corrective action taken as specified in 40 CFR 61.357(d)(8).
- (b) Pursuant to 40 CFR 61.357, the Permittee shall submit to the US EPA and IDEM, OAQ a quarterly report containing the following information:
  - (1) A certification that all the required inspections have been carried out as required by condition D.6.8 and D.6.9 as specified in 40 CFR 61.357(d)(6).
  - (2) Each 3-hour period of operation during which the average concentration of organics in the exhaust gases from the activated carbon canister system is more than 20 percent greater than the design concentration level of organics in the exhaust gas as specified in 40 CFR 61.357(d)(7)(iv)(D).
  - (3) Each occurrence when the carbon in the carbon canister is not replaced at the predetermined interval specified in 61.354(c) as specified in 40 CFR 61.357(d)(7)(iv)(I).
  - (4) Identifies any period in which the pressure in the waste management unit is equal to or greater than atmospheric pressure if the cover and closed-vent system operate in this manner as specified in 40 CFR 61.357(d)(7)(v).

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION  
  
PART 70 OPERATING PERMIT  
CERTIFICATION**

Source Name: ESSROC Cement Corporation  
Source Address: State Road 25 South, 3084 W. C.R. 225 South, Logansport, Indiana  
Mailing Address: State Road 25 South, 3084 W. C.R. 225 South, Logansport, Indiana  
Part 70 Permit No.: T017-6033-00005

**This certification shall be included when submitting monitoring, testing reports/results  
or other documents as required by this permit.**

Please check what document is being certified:

- ? Annual Compliance Certification Letter
- ? Test Result (specify) \_\_\_\_\_
- ? Report (specify) \_\_\_\_\_
- ? Notification (specify) \_\_\_\_\_
- ? Affidavit (specify) \_\_\_\_\_
- ? Other (specify) \_\_\_\_\_

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:



**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT**

**OFFICE OF AIR QUALITY**

**COMPLIANCE DATA SECTION**

**P.O. Box 6015**

**100 North Senate Avenue**

**Indianapolis, Indiana 46206-6015**

**Phone: 317-233-5674**

**Fax: 317-233-5967**

**PART 70 OPERATING PERMIT  
EMERGENCY OCCURRENCE REPORT**

Source Name: ESSROC Cement Corporation  
Source Address: State Road 25 South, 3084 W. C.R. 225 South, Logansport, Indiana  
Mailing Address: State Road 25 South, 3084 W. C.R. 225 South, Logansport, Indiana  
Part 70 Permit No.: T017-6033-00005

**This form consists of 2 pages**

**Page 1 of 2**

- |  |
|--|
| <p>? This is an emergency as defined in 326 IAC 2-7-1(12)</p> <p>? The Permittee must notify the Office of Air Quality (OAQ), within four (4) business hours (1-800-451-6027 or 317-233-5674, ask for Compliance Section); and</p> <p>? The Permittee must submit notice in writing or by facsimile within two (2) working days (Facsimile Number: 317-233-5967), and follow the other requirements of 326 IAC 2-7-16.</p> |
|--|

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:
Control Equipment:
Permit Condition or Operation Limitation in Permit:
Description of the Emergency:

Describe the cause of the Emergency:

If any of the following are not applicable, mark N/A

**Page 2 of 2**

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency?    Y    N Describe:
Type of Pollutants Emitted: TSP, PM-10, SO <sub>2</sub> , VOC, NO <sub>x</sub> , CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

A certification is not required for this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION**

**Part 70 Quarterly Report for Use When Combusting Only Coal**

Source Name: ESSROC Cement Corporation  
Source Address: State Road 25 South, 3084 W. C.R. 225 South, Logansport, Indiana  
Mailing Address: State Road 25 South, 3084 W. C.R. 225 South, Logansport, Indiana  
Part 70 Permit No.: T017-6033-00005  
Facility: Kilns #1 and 2  
Parameter: Sulfur Dioxide (SO<sub>2</sub>) from the combustion of coal  
Limit: 6.0 pounds per million Btu heat input

FACILITY: \_\_\_\_\_ YEAR: \_\_\_\_\_

Month	Monthly Average Coal Sulfur Content (%)	Monthly Average Coal Heat Content (MMBtu/lb)	Coal Consumption (tons)	Equivalent Sulfur Dioxide Emissions (lbs/MMBtu)

? No deviation occurred in this quarter.

? Deviation/s occurred in this quarter.

Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_  
Title / Position: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Date: \_\_\_\_\_  
Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION**

**Part 70 Quarterly Report for Use When Combusting Only Fuel Oil**

Source Name: ESSROC Cement Corporation  
Source Address: State Road 25 South, 3084 W. C.R. 225 South, Logansport, Indiana  
Mailing Address: State Road 25 South, 3084 W. C.R. 225 South, Logansport, Indiana  
Part 70 Permit No.: T017-6033-00005  
Facility: Kilns #1 and 2  
Parameter: Sulfur Dioxide (SO<sub>2</sub>) from fuel oil combustion  
Limit: 0.5 pounds per million Btu heat input

FACILITY: \_\_\_\_\_ YEAR: \_\_\_\_\_

Month	Monthly Average Fuel Oil Sulfur Content (%)	Monthly Average Fuel Oil Heat Content (MMBtu/lb)	Fuel Oil Consumption (Gallons)	Equivalent Sulfur Dioxide Emissions (lbs/MMBtu)

? No deviation occurred in this quarter.

? Deviation/s occurred in this quarter.

Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_  
Title / Position: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Date: \_\_\_\_\_  
Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION**

**Part 70 Quarterly Report for Use When Combusting Coal and Fuel  
Oil Simultaneously**

Source Name: ESSROC Cement Corporation  
Source Address: State Road 25 South, 3084 W. C.R. 225 South, Logansport, Indiana  
Mailing Address: State Road 25 South, 3084 W. C.R. 225 South, Logansport, Indiana  
Part 70 Permit No.: T017-6033-00005  
Facility: Kilns #1 and 2  
Parameter: Sulfur Dioxide (SO<sub>2</sub>) from the simultaneous combustion of coal and oil  
Limit: 6.0 pounds per million Btu heat input

Compliance with the SO<sub>2</sub> limit shall be determined using the following equation:

SO<sub>2</sub> emissions (lbs/MMBtu) = (Fuel oil usage x EF coefficient x fuel oil sulfur content + coal usage x EF coefficient x coal sulfur content) / (fuel oil usage x HHV oil + coal usage x HHV coal).

FACILITY: \_\_\_\_\_ YEAR: \_\_\_\_\_

Month	Monthly Average Sulfur Content (%)		Monthly Average Heat Content (MMBtu/lb)		Fuel Consumption		Equivalent Sulfur Dioxide Emissions (lbs/MMBtu)		
	Coal	Fuel Oil	Coal	Fuel Oil	Coal (tons)	Fuel Oil (gallons)	Coal	Fuel Oil	Total

? No deviation occurred in this quarter.

? Deviation/s occurred in this quarter.

Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION**

**PART 70 OPERATING PERMIT  
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: ESSROC Cement Corporation  
Source Address: State Road 25 South, 3084 W. C.R. 225 South, Logansport, Indiana  
Mailing Address: State Road 25 South, 3084 W. C.R. 225 South, Logansport, Indiana  
Part 70 Permit No.: T017-6033-00005

Months: \_\_\_\_\_ to \_\_\_\_\_ Year: \_\_\_\_\_

Page 1 of 2

This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. Deviations that are required to be reported by an applicable requirement shall be reported according to the schedule stated in the applicable requirement and do not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

? NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

? THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

**Permit Requirement** (specify permit condition #)

**Date of Deviation:**

**Duration of Deviation:**

**Number of Deviations:**

**Probable Cause of Deviation:**

**Response Steps Taken:**

**Permit Requirement** (specify permit condition #)

**Date of Deviation:**

**Duration of Deviation:**

**Number of Deviations:**

**Probable Cause of Deviation:**

**Response Steps Taken:**

<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	
<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	
<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	

Form Completed By: \_\_\_\_\_

Title/Position: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Attach a signed certification to complete this report.



# **Indiana Department of Environmental Management Office of Air Quality**

## **Addendum to the Technical Support Document for a Part 70 Operating Permit**

**Source Name:** ESSROC Cement Corporation  
**Source Location:** State Road 25 South, 3084 West County Road 225 South,  
Logansport, Indiana 46947  
**County:** Cass  
**SIC Code:** 3241  
**Operation Permit No.:** T017-6033-00005  
**Permit Reviewer:** Nisha Sizemore

On March 2, 2002, the Office of Air Quality (OAQ) had a notice published in the Pharos Tribune, Logansport, Indiana, stating that ESSROC Cement Corporation had applied for a Part 70 Operating Permit to operate a portland cement manufacturing operation. The notice also stated that OAQ proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On September 11, 2003, Laurence A. McHugh of Barnes & Thornburg, on behalf of ESSROC Cement Corporation, provided written comments on the proposed permit during the public comment period. A summary of the comments and IDEM's responses is as follows (new language is shown in bold and deleted language is shown with strikeouts):

### **Comment #1**

ESSROC believes that the definition of potential emissions should drive applicability decisions. This definition calculates emissions without regard to control equipment "unless such equipment is (aside from air pollution control requirements) necessary for the facility to produce its normal product or is integral to the normal operation of the facility" (326 IAC 1-2-55). In its "Background Information for Proposed New Source Performance Standards" for Portland Cement Plants, August 1971, EPA noted that "baghouses are the most commonly employed control devices for mills, conveyors, transfer points, storage silos, etc. Many of the dust collectors serve to recover product from exhaust gas streams and to increase product yields. Their function as air pollution control devices may, therefore, be secondary." As EPA realized, the use of baghouses on such equipment at the finish end of the plant (after the clinker cooler) had been routinely used to recover product long before the Clean Air Act was amended in 1970. These baghouses are therefore integral to the normal operation of the facility and their collection efficiency must be factored into the calculation of potential emissions.

### **Response #1**

IDEM does not agree that all baghouses that collect some amount of product for reuse, should be considered integral to the process. IDEM's criteria for determining whether such baghouses should be considered integral includes an evaluation of the annualized cost of purchasing, installing and operating the baghouse as compared to the cost savings from collecting and reusing the material that the baghouse captures. If there is an overwhelming cost savings from collecting and reusing the material captured by the

baghouse, as compared to the annualized cost of purchasing, installing, and operating the baghouse, then such baghouse should be considered integral. ESSROC has not submitted sufficient information to make a determination as to whether these baghouses should be considered integral to the processes they control.

## Comment #2

The permit repeatedly seeks to impose redundant and unnecessary monitoring requirements. See, e.g., sections D.1.7, D.1.8, D.1.9, D.1.10 and D.1.11. If visible emission observations are taken on a daily basis, this should be sufficient. Pressure drop readings, inspections, etc. should be an alternative, not an additional requirement. EPA Region 7 published a "Policy on Periodic Monitoring for Opacity" in April 1997. A number of observations in that policy are relevant. Noting that Method 9 readings or COMs are not a practical solution for all situations, it suggested that the source could be required to certify that it conducted a visible emissions survey each day the plant operated and that it was or was not in compliance with the applicable limit. As an alternative, the policy notes, "a source may be able to show that a properly functioning baghouse should result in no excess visible emissions as long as it operates within an established pressure drop range." In contrast to this reasoned approach, ESSROC's permit requires VE readings as often as once per shift in addition to daily (or per shift) pressure drop readings, periodic baghouse inspections, and similar requirements for the ESPs on the kilns. These redundant requirements are merely cumulative and are not necessary.

Conditions D.1.7 through D.1.9, and D.1.11

Our previous comments have requested that these provisions be deleted or amended to remove the monitoring requirements and related record keeping and reporting provisions. While maintaining those previous comments, we suggest that the following edits for these conditions may be possible changes in the event the monitoring requirements are not removed outright. Our provision of this suggested language in no way waives our right to argue the position(s) taken in previous comments.

### D.1.7 (Visible Emission Notations)

Change the frequency to once per month. Instead of requiring a trained employee to record whether emissions are present, simply require a trained employee to verify whether emissions are present.

### D.1.8 (Parametric Monitoring)

Change the frequency to once per day. Delete the word "static."

### D.1.9 (Baghouse Inspections)

Instead of specifying a frequency for baghouse inspections, simply require the PMP to include a schedule for appropriate baghouse inspections.

### D.1.11 (Record Keeping Requirements)

Change this condition to reflect the changes suggested above.

Conditions D.2.11 through D.2.15, and D.4.9 through D.4.14

Our previous comments have requested that these provisions be deleted or amended to remove the monitoring requirements and related record keeping and reporting provisions. While maintaining those previous comments, we suggest that the following edits for these conditions may be possible changes in the event the monitoring requirements are not removed outright. Our provision of this suggested language in no way waives our right to argue the position(s) taken in previous comments.

### D.2.11 (Visible Emission Notations)

Change the once per shift frequency to the same frequency as required by the NESHAP.

D.2.12 and D.4.9 (Parametric Monitoring)

Change the frequency to once per day. Delete the word "static."

D.2.13 and D.4.10 (Baghouse Inspections)

Instead of specifying a frequency for baghouse inspections, simply require the PMP to include a schedule for appropriate baghouse inspections.

D.2.15 and D.4.14 (Record Keeping Requirements)

Change this condition to reflect the changes suggested above.

## Response #2

The requirements to monitor the pressure drop across the baghouses and also observe visible emissions from the stacks are not duplicative monitoring. Compliance monitoring conditions such as this requirement to perform visible emission notations, are required in order to demonstrate continuous compliance with the permit requirements. Visible emission notations are used to indicate compliance with 326 IAC 5-1 and the particulate matter and opacity limits pursuant to 40 CFR 63, Subpart LLL and 326 IAC 6-3-2. Since bag failure can occur suddenly and without warning, possibly causing a violation of 326 IAC 5-1, 326 IAC 6-3-2, or 40 CFR 63, Subpart LLL, monthly visible emission notations would not be sufficient for the Permittee to demonstrate continuous compliance. However, IDEM has changed the frequency of the visible emission notations from once per shift to once per day.

Visible emission notations are used to monitor the emissions from the stack, while baghouse pressure drop provides an indication of whether it is operating properly. An observation that visible emissions are "normal" would not necessarily indicate compliance with the particulate limit, especially in the case where the control device might be operating at less than optimum levels (which could be indicated by monitoring the pressure drop). Monitoring of the static pressure drop can alert the operator to relative changes in operating conditions (such as dust cake resistance) over a period of time. The operator can use this information to chart trends and determine if the unit is operating within the optimal range as determined by baseline testing of the unit and manufacturer's specifications. Any deviations from the normal operational range of the unit, whether gradual or sudden, should alert the operator that the unit needs maintenance. The Compliance Response Plan should include response steps to anticipate corrective actions when abnormal conditions arise. Large changes in the pressure drop could result in damage to the bags if not properly addressed. Additionally, monitoring of pressure drop helps assure good capture. Therefore, in addition to the visible emission notations, pressure drop readings should be taken at least once per day. IDEM has changed the requirements to measure the pressure drops across the baghouses from once per shift to once per day.

Baghouse inspections are necessary in addition to the other monitoring requirements because an inspection can alert the operator to a problem with the baghouse that would not necessarily be identified by checking the pressure drop or the visible emissions from the stack. Identifying potential problems with the baghouse before excess emissions occur allows the Permittee to avoid potential violations or malfunctions. IDEM does agree to allow the timing and frequency of the baghouse inspections to be coordinated with the plant's annual shutdown and repair schedule.

All conditions requiring once per shift visible emissions have been changed as shown below.

#### D.1.65 Visible Emissions Notations

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- (a) Visible emission notations of each of the baghouse stack exhausts shall be performed once per ~~shift~~ **day** during normal daylight operations. A trained employee shall record whether visible emissions are present.

All conditions requiring the Permittee to check the pressure drop across a baghouse, have been changed as shown below.

#### D.1.76 Parametric Monitoring

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The Permittee shall record the total static pressure drop across each baghouse, at least once per ~~shift~~ **day** when the associated facility is in operation.

All conditions requiring baghouse inspections have been changed as shown below.

#### D.1.87 Baghouse Inspections

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An inspection shall be performed ~~each calendar quarter~~ **during every major maintenance outage, but no less than once every fourteen (14) months**, of all bags controlling the facilities listed in this section. Inspections required by this condition shall not be performed in consecutive months. All defective bags shall be replaced.

#### Comment #3

We recognize that a Part 70 permit is supposed to contain all applicable requirements and IDEM is reluctant to merely incorporate them by reference. We also realize that the NESHAPs are voluminous. Nevertheless, regurgitating some part of the NESHAP requirement and incorporating the rest is the worst of both worlds. We suggest that any NESHAP (Subparts LLL and EEE, DD, FF, V, etc.) be reproduced in total in an Appendix to the permit and incorporated by reference for review and compliance, especially during an inspection, and the public will still have ready access to the text of the subparts in the appendix. There are a number of specific places in the permit where requirements, exemptions, exceptions, alternatives, etc. in the NESHAP were misstated or omitted. The same may be true of requirements incorporated from other CAA programs and IDEM rules.

#### Response #3

IDEM includes only the applicable portions of the NESHAPs in the permit. Those portions of the NESHAP which are applicable, are included in the permit in detail. In this way, the permit can be used as a tool to determine which portions of the rule are applicable to each individual facility. No changes have been made to any permit conditions as a result of this comment.

#### Comment #4

There are several conditions in the proposed permit that reference the applicability date of the NESHAP, even though that date has passed and such reference is unnecessary. This occurs in Conditions D.3.17(d), and D.3.18(b), (c) and (d).

#### Response #4

IDEM agrees to delete the compliance date of the rule, wherever the compliance date has already passed.

#### D.3.17 Record Keeping Requirements

- 
- (d) To document compliance with the NESHAP ~~(after September 30, 2002)~~, the Permittee shall maintain all records required by 40 CFR 63.1210 and 40 CFR 63.1211, including, but not limited to, the following:

#### D.3.18 Reporting Requirements

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- (b) A quarterly summary of excess opacity emissions, as defined in 326 IAC 3-5-7, from the continuous monitoring system, shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, within thirty (30) days after the end of the quarter being reported. If applicable, the excess opacity summary shall also be submitted in accordance with 40 CFR 63.10(e)(3) ~~(beginning September 30, 2002)~~.
- (c) ~~Beginning September 30, 2002, the~~ The Permittee shall submit a continuous monitoring system (CMS) performance report with the excess opacity summaries, in accordance with 40 CFR 63.10(e)(3) and 40 CFR 63, Subpart A.
- (d) ~~Beginning September 30, 2002, the~~ The Permittee shall submit a semi-annual summary report which contains the information specified in 40 CFR 63.10(e)(3)(vi). If the total continuous monitoring system (CMS) downtime for any CEM or any CMS for the reporting period is ten percent or greater of the total operating time for the reporting period, the Permittee shall submit an excess emissions and CMS performance report along with the summary report.

#### Comment #5

ESSROC requests the following changes to Section A and descriptions in Sections D.

1. Change A.2(18) to Outside storage stockpiles, identified as EU512, created in 1962.
2. In A.2(25)-(33), (53)-(55), (75)-(82), (107), and (113), change "capacity" to "throughput"
3. In A.2(37) indicate that the #1 recycled dust scoop system was constructed in 1995 and the insufflation system was constructed in 1965. Delete reference to baghouse 136 and 137 because these two emission units exhaust directly to the kilns. The baghouses and stacks originally in place on the equipment were related to an alternative exhaust that is not used.
4. In A.2(61), please clarify that the capacities of the tanks are storage capacities.
5. Combine A.2(116) through A.2(118). All silos #11 through 18 should be identified as EU704, constructed in 1965, controlled by baghouse 126 and exhausting to stack EP704. Combine A.2(119) through A.2(122). All silos #1 through 8 should be identified as EU709, controlled by baghouse 122 and exhausting to stack EP709.
6. In A.2(134) and (135) please change "heat input capacity" to "nominal heat input."

#### Response #5

IDEM has made the requested changes as shown below. Items have been renumbered as necessary. The same changes have been made to the descriptions in the appropriate D sections of the permit.

#### Raw Material / Clinker Stockpile Operations

- (18) ~~West~~ **Outside** clinker storage stockpiles, identified as EU512, created in 1962.

### Raw Material Sizing Operations

- (25) One (1) apron feeder transfer to primary crusher, identified as EU115, constructed in 1961, with a nominal ~~capacity~~ **throughput** of 550 tons per hour.

### Kiln #1 and kiln #2 Recycled CKD Operations

- (37) #1 recycled dust scoop system/insufflation system, identified as EU411, ~~constructed in 1995, with emissions controlled by a baghouse, identified as baghouse 136 and CE403, and exhausting to one (1) stack identified as EP403~~ **with emissions exhausting directly to the kilns.** The #1 recycled dust scoop was constructed in 1995. The insufflation system was constructed in 1965.

### Kiln #2 Recycled CKD Operations

- (45) #2 recycled dust scoop system/insufflation system, identified as EU420, ~~constructed in March 1995, with emissions controlled by a baghouse, identified as baghouse 137 and CE406, and exhausting to one (1) stack identified as EP405~~ **with emissions exhausting directly to the kilns.** The #2 recycled dust scoop system was constructed in 1995. The insufflation system was constructed in 1965.

### Crane Storage Facilities

- (61) West flyash truck unloading utilizing pneumatic conveying, identified as EU210, including tank 9, commenced operation in 1962, with a nominal **storage** capacity of 100 tons, tank 10 with a nominal **storage** capacity of 100 tons, tank 11 with a nominal **storage** capacity of 125 tons, and tank 12 with a nominal capacity of 125 tons, with emissions controlled by a baghouse, identified as baghouse 138 and CE202, and exhausting to one (1) stack identified as EP202.

### Finish Product Silo Storage Facilities

- ~~(116) Silos 11/13, identified as EU703, constructed in 1965, with emissions controlled by a baghouse, identified as baghouse 125 and CE703, and exhausting to one (1) stack identified as EP703.~~
- ~~(117)~~ **(116)** Silos **11/12/13/14/15/16/17/18**, identified as EU704, constructed in 1965, with emissions controlled by a baghouse, identified as baghouse 126 and CE704, and exhausting to one (1) stack identified as EP704.
- ~~(118) Silos 15/16/18, identified as EU705, constructed in 1965, with emissions controlled by a baghouse, identified as baghouse 135 and CE705, and exhausting to one (1) stack identified as EP705.~~
- ~~(119) Silos 1/3, identified as EU707, constructed in 1961, with emissions controlled by a baghouse, identified as baghouse 120 and CE707, and exhausting to one (1) stack identified as EP707.~~
- ~~(120) Silos 2/4, identified as EU708, constructed in 1961, with emissions controlled by a baghouse, identified as baghouse 121 and CE708, and exhausting to one (1) stack~~

~~identified as EP708.~~

~~(121)~~(117) Silos 1/ ~~2/3/4/5/6/7/8~~, identified as EU709, constructed in 1961, with emissions controlled by a baghouse, identified as baghouse 122 and CE709, and exhausting to one (1) stack identified as EP709.

~~(122)~~ Silos ~~6/8~~, identified as ~~EU710~~, constructed in 1961, with emissions controlled by a baghouse, identified as baghouse 123 and CE710, and exhausting to one (1) stack identified as ~~EP710~~.

### Kiln #1 and Kiln #2 Facilities

(134) One (1) wet process rotary cement kiln #1, identified as EU401, constructed in 1962, with a **nominal** heat input ~~capacity~~ of 245 million Btu per hour, with a nominal production rate of 42.0 tons per hour (as clinker), with PM emissions controlled by one (1) electrostatic precipitator (ESP #1), identified as CE401, and exhausting to one (1) stack, identified as EP401. Raw material sources include clay, sand, limestone, and other sources of silica, alumina, iron, calcium, magnesium, and trace elements.

(135) One (1) wet process rotary cement kiln #2, identified as EU413, constructed in 1964, with a **nominal** heat input ~~capacity~~ of 245 million Btu per hour, with a nominal production rate of 42.0 tons per hour (as clinker), with PM emissions controlled by one (1) electrostatic precipitator (ESP #1), identified as CE401, and exhausting to one (1) stack, identified as EP401. Raw material sources include clay, sand, limestone, and other sources of silica, alumina, iron, calcium, magnesium, and trace elements.

Also, since the facilities listed in Condition D.1.3 are no longer in existence, the condition has been deleted from the permit.

#### ~~D.1.3 Prevention of Significant Deterioration (PSD) [326 IAC 2-2]~~

~~In order to render the requirements of PSD not applicable, the following conditions shall apply:~~

- ~~(a) The PM emissions from baghouse 136 (CE403) controlling the #1 recycled dust scoop/insufflation system (EU411) shall not exceed 4.11 pounds per hour.~~
- ~~(b) The PM10 emissions from baghouse 136 (CE403) controlling the #1 recycled dust scoop/insufflation system (EU411) shall not exceed 2.40 pounds per hour.~~
- ~~(c) The PM emissions from baghouse 137 (CE420) controlling the #2 recycled dust scoop/insufflation system (EU420) shall not exceed 1.37 pounds per hour.~~
- ~~(d) The PM10 emissions from baghouse 137 (CE420) controlling the #2 recycled dust scoop/insufflation system (EU420) shall not exceed 0.80 pounds per hour.~~

~~Therefore, the requirements of 326 IAC 2-2 (PSD) are not applicable.~~

### Comment #6

Condition B.8

This condition should be amended to reflect that not every provision of the permit is enforceable by adding the phrase "except where it is otherwise stated in the permit" just before the phrase "is grounds for" in Condition B.8(a) and just after the phrase "not specifically designated as federally enforceable," in Condition B.8(b).

In a January 31, 2002 draft amendment to NPD A/R 007 ("Guidelines for Submittal and Review of Annual Compliance Certifications . . ."), IDEM states that ". . . a deviation from an emission limit or record keeping requirement in Section D would require that a deviation would also have to be identified for permit condition B.8 (Compliance with Permit Conditions). We appreciate the fact that 40 CFR 70.6(a)(6)(i) requires this language, but there is nothing in Part 70, 326 IAC 2-7 or the CAA which requires this clause to be a separately enforceable provision of the permit. Requiring this to be listed as a separate deviation exposes Permittees to enforcement for at least two violations for every substantive deviation. We suggest the following language as B.8(e):

A deviation from any other condition of this permit shall not give rise to a separate enforcement action for a violation of this section.

#### **Response #6**

IDEM has decided to move the provision that is required by 326 IAC 2-7-5(6) from Condition B.8 to the front of the permit. IDEM has also added a statement to the front of the permit that indicates that the permit also includes some conditions intended to fulfill requirements of new source review.

IDEM disagrees with the Permittee's comment that not every provision of the permit is enforceable. All conditions in this permit are enforceable. Additionally, since the language has been moved to the front of the permit, it is not necessary to include the suggested language that a deviation from any other condition of the permit shall not give rise to a separate enforcement action for violation of this section. Except for moving the language to the front of the permit, there has been no other change as a result of this comment.

## **PART 70 OPERATING PERMIT OFFICE OF AIR QUALITY**

**ESSROC Cement Corporation  
State Road 25 South, 3084 West County Road 225 South  
Logansport, Indiana 46947**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

**The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. Noncompliance with any provision of this permit, except any provision specifically designated as not federally enforceable, constitutes a violation of the Clean Air Act. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the**



**conditions of this permit. An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.**

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17. **This permit also addresses certain new source review requirements for existing equipment and is intended to fulfill the new source review procedures pursuant to 326 IAC 2-7-10.5, applicable to those conditions.**

~~B.8 Compliance with Permit Conditions [326 IAC 2-7-5(6)(A)] [326 IAC 2-7-5(6)(B)]~~

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- ~~(a) As provided in 326 IAC 2-7-5(6), the Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for:~~
- ~~(1) Enforcement action;~~
- ~~(2) Permit termination, revocation and reissuance, or modification; or~~
- ~~(3) Denial of a permit renewal application.~~
- ~~(b) Noncompliance with any provision of this permit, except any provision specifically designated as not federally enforceable, constitutes a violation of the Clean Air Act.~~
- ~~(c) It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.~~
- ~~(d) An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B -- Emergency Provisions.~~

All subsequent conditions in Section B of the permit have been renumbered appropriately.

**Comment #7**

Condition B.11 (Preventive Maintenance Plan)

This condition should refer to the Operations and Maintenance (O&M Plan), not the Operations, Maintenance, and Monitoring (OMM) Plan. All other references to this plan throughout the permit should be corrected.

**Response #7**

The requested change has been made. Revisions to Conditions B.10(d) and C.18 are shown below.

B.10 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)]  
[326 IAC 1-6-3]

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- (d) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operations **and** Maintenance, ~~and Monitoring (OMM)~~ **(O&M)** Plan for a unit, such Plan is deemed to satisfy

the PMP requirements of 326 IAC 1-6-3 for that unit.

C.18 Compliance Response Plan - Preparation, Implementation, Records, and Reports  
[326 IAC 2-7-5] [326 IAC 2-7-6]

- 
- (a) The Permittee is required to prepare a Compliance Response Plan (CRP), for each compliance monitoring condition of this permit. If a Permittee is required to have an Operations and Maintenance, and Monitoring (~~OMM~~) (**O&M**) Plan under 40 CFR 63, such plans shall be deemed to satisfy the requirements of a CRP for those compliance monitoring conditions. A CRP shall be submitted to IDEM, OAQ upon request. The CRP may consist of information contained within the Preventive Maintenance Plan(s) described in Section B - Preventive Maintenance Plan, of this permit. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee, supplemented from time to time by the Permittee, maintained on site, and comprised of:
- (1) Reasonable response steps that may be implemented in the event that a response step is needed pursuant to the requirements of Section D of this permit; and an expected time frame for taking reasonable response steps.
  - (2) If, at any time, the Permittee takes reasonable response steps that are not set forth in the Permittee's current Compliance Response Plan or ~~OMM~~ **O&M** Plan and the Permittee documents such response in accordance with subsection (e) below, the Permittee shall amend its Compliance Response Plan or ~~OMM~~ **O&M** Plan to include such response steps taken.
- The ~~OMM~~ **O&M** Plan shall be submitted within the time frames specified by the applicable 40 CFR 63 requirement.
- (b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition as follows:
- (1) Reasonable response steps shall be taken as set forth in the Permittee's current Compliance Response Plan or ~~OMM~~ **O&M** Plan; or
  - (2) If none of the reasonable response steps listed in the Compliance Response Plan or ~~OMM~~ **O&M** Plan is applicable or responsive to the excursion, the Permittee shall devise and implement additional response steps as expeditiously as practical. Taking such additional response steps shall not be considered a deviation from this permit so long as the Permittee documents such response steps in accordance with this condition.

**Comment #8**

Condition B.24(b) should be deleted. 326 IAC 2-7-19 does not provide for permit revocation in response to non-payment. In any case, the provision is unnecessary and redundant because Condition B.8(a) already provides for revocation or enforcement for noncompliance with a permit term.

**Response #8**

The requirements of 326 IAC 2-1.1-7 apply to all sources required to pay fees under any provision of 326

IAC 2. Therefore, 326 IAC 2-1.1-7(7) is applicable, which specifies that nonpayment may result revocation of the permit. The rule cite 326 IAC 2-1.1-7 has been added to the title of the condition. No other changes to the condition were made as a result of this comment. The condition has been renumbered B.23.

**B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)] [326 IAC 2-1.1-7]**

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- (a) The Permittee shall pay annual fees to IDEM, OAQ within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.
- (b) Except as provided in 326 IAC 2-7-19(e), failure to pay may result in administrative enforcement action or revocation of this permit.
- (c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-0425 (ask for OAQ, Technical Support and Modeling Section), to determine the appropriate permit fee.

**Comment #9**

Condition C.13(d)(2) should be deleted. There is no economically or technically practical way to perform supplemental or intermittent monitoring of the NOx emissions; that is why CEMS are required in the first place. Additionally, each of the provisions in Condition C.13 should apply only to CEMS required by the permit or necessary to comply with the permit.

**Response #9**

The Permittee is required to certify continuous compliance with all conditions of the permit. The Permittee must have sufficient information available in order to be able to certify continuous compliance. If the CEMS fails and the Permittee does not perform any supplemental monitoring during the period of time when the CEMS is not operating, there will not be sufficient information available for the Permittee to be able to certify continuous compliance during that time period. Therefore, the permit must include a requirement to perform supplemental monitoring whenever the CEMS is not in operation and the emission unit is in operation. Since the Permittee did not provide any information as to what supplemental monitoring would be most appropriate to perform during times when the CEMS fails, IDEM included Condition D.3.12(d), which specifies what supplemental monitoring shall be performed whenever the CEMS is not in operation and the emission unit is in operation. There have been no changes to the permit as a result of this comment.

**Comment #10**

Condition C.23(a)-(e)

For any of the various notifications listed in these sections that ESSROC has already submitted, these sections should therefore be deleted or modified to reflect this.

Condition C.23(f)

If all notifications have been submitted, the mailing address for notifications is unnecessary and Condition C.23(f) should be deleted.

**Response #10**

The requirement to submit the notifications is an applicable requirement pursuant to 40 CFR 63. Pursuant to 326 IAC 2-7-5(1), the Part 70 permit must include all applicable requirements. Even if the Permittee has

already submitted one or more of the notifications, these requirements are still applicable.

The reports listed in this condition must be submitted to EPA. IDEM has not yet incorporated the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Portland Cement Plants (40 CFR 63, Subpart LLL) or the NESHAP for hazardous waste combustion facilities (40 CFR 63, Subpart EEE) into the State Implementation Plan (SIP); therefore, at this time EPA is responsible for enforcing these NESHAPs.

#### Comment #11

Conditions D.2.5, D.2.6, and D.2.8, regarding the NSPS, Subpart Y.

The coal mills are not emission units because they do not exhaust to the atmosphere. Instead, they are part of the semi-direct firing system, which means that the conveyance air that moves material through the mills is discharged directly into, and becomes the combustion air for, the kiln. Therefore, while the kiln description may include the mills as part of that process, the mills should not be described as separate emission units. All references to limitations, monitoring, record keeping and reporting for the mills as emission units should be removed from the permit, in the above-listed conditions as well as elsewhere.

#### Response #11

IDEM agrees that since the coal mills exhaust to the kilns, they are not subject to separate applicable requirements, such as the NSPS, Subpart Y. IDEM has deleted Conditions D.2.5 and D.2.6, and made revisions to the descriptions of the units and to Condition D.2.8, as shown below.

Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)]  
[326 IAC 2-7-5(15)]

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This stationary source consists of the following emission units and pollution control devices:

#### Kiln #1 and Kiln #2 Facilities

- (129) One (1) wet process rotary cement kiln #1, identified as EU401, constructed in 1962, with a nominal heat input of 245 million Btu per hour, with a nominal production rate of 42.0 tons per hour (as clinker), with PM emissions controlled by one (1) electrostatic precipitator (ESP #1), identified as CE401, and exhausting to one (1) stack, identified as EP401. Raw material sources include clay, sand, limestone, and other sources of silica, alumina, iron, calcium, magnesium, and trace elements. **As part of the semi-direct firing system, a pulverizing mill is used to grind the solid fuels that are used in the kiln. The pulverizing mill exhausts to the kiln.**
- (130) One (1) wet process rotary cement kiln #2, identified as EU413, constructed in 1964, with a nominal heat input of 245 million Btu per hour, with a nominal production rate of 42.0 tons per hour (as clinker), with PM emissions controlled by one (1) electrostatic precipitator (ESP #1), identified as CE401, and exhausting to one (1) stack, identified as EP401. Raw material sources include clay, sand, limestone, and other sources of silica, alumina, iron, calcium, magnesium, and trace elements. **As part of the semi-direct firing system, a pulverizing mill is used to grind the solid fuels that are used in the kiln. The pulverizing mill exhausts to the kiln.**

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~~D.2.5 General Provisions Relating to NSPS [326 IAC 12-1][40 CFR Part 60, Subpart A]~~

~~The provisions of 40 CFR Part 60, Subpart A General Provisions, which are incorporated by reference in 326 IAC 12-1, apply to the coal mills #1 and #2, and as described in this section~~

~~except when otherwise specified in 40 CFR Part 60, Subpart Y.~~

~~D.2.6 NSPS for Coal Preparation Plants [326 IAC 12] [40 CFR 60, Subpart Y]~~

~~Pursuant to 40 CFR 60.252(e), the opacity from the coal mills #1 and #2 shall be less than 20 percent.~~

D.2.8 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11] [40 CFR 63, Subpart LLL]

- (a) No later than 180 days after June 14, 2002, which is the compliance date for the Portland Cement Manufacturing Industry NESHAP, the Permittee shall demonstrate initial compliance with the limits established in Condition D.2.3 by conducting a test in accordance with 40 CFR 63.1349, Method 9 of 40 CFR Part 60, Appendix A, and Section C - Performance Testing.
- (b) ~~Pursuant to 40 CFR 60, Subpart Y, the Permittee shall conduct Method 9 opacity tests to determine compliance with the opacity limits for the coal mills #1 and #2 in Condition D.2.6. These tests shall be conducted within 180 days after issuance of this Part 70 permit. These tests shall be conducted in accordance with Section C - Performance Testing.~~
- ~~(c)~~ In order to demonstrate compliance with Condition D.2.1, the Permittee shall perform PM testing on the Finish mill #1 (EU601 through EU603), Finish mill #2 (EU604 through EU606), and Raw Mills (EU205 through EU209, EU212, EU215, and EU216) utilizing methods as approved by the Commissioner. These tests shall be conducted within 180 days after issuance of this Part 70 permit. These tests shall be repeated at least once every five years. Testing shall be conducted in accordance with Section C- Performance Testing. All associated facilities exhausting to a single stack must all be operating when determining compliance with the limit.

#### Comment #12

The testing required in Condition D.2.8(c) is unnecessary to assure compliance, therefore, the testing should be deleted.

#### Response #12

The emission units in question rely on the operation of baghouses to comply with the applicable limits. The Permittee has never performed an OAQ approved stack test on any of these units to demonstrate compliance with the applicable limits. Therefore, IDEM believes it is necessary to require stack testing for these units.

Even if IDEM were to agree that the baghouses in question are integral to the processes they control, a demonstration that a baghouse is integral to the process does not assure that the baghouse operates at the level of control efficiency necessary to comply with all applicable emission limits.

#### Comment #13

The reference to Condition D.2.4 in Condition D.2.9 (Particulate Matter) should be D.2.3.

#### Response #13

Condition D.2.9 (Particulate Matter) already refers to Condition D.2.3.

#### **Comment #14**

Condition D.3.7

ESSROC believes that IDEM's statement that the kilns are subject to PSD is incorrect. This statement should be deleted and the permit shield should apply to the kilns with regard to 326 IAC 2-2.

#### **Response #14**

The EPA has issued a notice of violation alleging that the kilns are not in compliance with the requirements of 326 IAC 2-2 Prevention of Significant Deterioration (PSD). The EPA alleges that the Permittee made modifications to the kilns, and began using pet coke as a fuel in the kilns, both of which triggered the requirements of PSD. This case is presently on-going and has not yet been resolved; therefore, no detailed compliance plan has been established. Since the case has not yet been resolved, IDEM cannot issue a Part 70 permit that establishes a permit shield for the kilns with regards to the requirements of 326 IAC 2-2 (PSD). Once the enforcement case has been resolved, IDEM will reopen the permit to establish the permit shield for the kilns and, if necessary, include the provisions of the compliance plan in the Part 70 permit.

#### **Comment #15**

The proper date to be cited in Condition D.3.8 is September 30, 2003.

#### **Response #15**

IDEM has deleted the last sentence of Condition D.3.8 because Condition B.10 (Preventive Maintenance Plan) already explains that, to the extent the Permittee is required to have an O&M Plan, such plan can satisfy the requirement to have a PMP.

#### **D.3.8 Preventive Maintenance Plan [326 IAC 2-7-5(13)]**

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A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and the control devices. ~~If the Operations and Maintenance Plan required by Condition D.3.13 is developed in accordance with Section B- Preventive Maintenance Plan, then after September 30, 2002, the Operations and Maintenance Plan shall satisfy this condition.~~

The same change has also been made to Conditions D.2.7 and D.4.4.

#### **D.2.7 Preventive Maintenance Plan [326 IAC 2-7-5(13)]**

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A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the control devices listed in this section. ~~If the Operations and Maintenance Plan required by Condition D.2.10 is developed in accordance with Section B- Preventive Maintenance Plan, then after June 14, 2002, the Operations and Maintenance Plan shall satisfy this condition.~~

#### **D.4.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]**

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A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and their control devices. ~~If the Operations and Maintenance Plan required by Condition D.4.8 is developed in accordance with Section B- Preventive Maintenance Plan, then after June 14, 2002, the Operations and Maintenance Plan shall~~

~~satisfy this condition.~~

#### **Comment #16**

Condition D.3.9 (Testing Requirements)

In paragraph (a), the compliance date should be September 30, 2003.

In paragraph (b), the requirement to operate the equipment at 95% or more of maximum operating capacity during performance tests should be amended to track the language of 326 IAC 3-6-3, which requires that the facility be operating at 95% to 100% of permitted operating capacity, where "capacity" is defined as "the design capacity of the facility or other operating capacities agreed to by the source and the department" under 326 IAC 3-6-3(a)(3). No changes have been made to the permit as a result of this comment.

#### **Response #16**

IDEM has corrected the compliance date in paragraph (a) of the condition.

Since it is not possible for a unit to operate above 100% of its maximum production capacity, it is not necessary to state a range that has an upper limit of 100%. Rather, it is sufficient to state that the unit must operate at 95% of its maximum production capacity or more. The definition of "capacity" does not need to be part of the permit condition. The condition already references the rule 326 IAC 3-6-3, which includes the definition of "capacity."

D.3.9 Testing Requirements [40 CFR 63, Subpart EEE] [326 IAC 2-7-6(1),(6)] [326 IAC 2-1-3(i)(8)] [326 IAC 2-1.1-11]

- 
- (a) No later than six months after September 30, ~~2002~~ **2003**, which is the compliance date for the National Emission Standards for Hazardous Air Pollutants (NESHAP) for the Hazardous Waste Combustors, the Permittee shall demonstrate initial compliance with the emission limits established in Condition D.3.3 by commencing initial comprehensive performance tests in accordance with 40 CFR 63.1207 and Section C - Performance Testing. These tests shall also establish limits for the operating parameters provided by 40 CFR 63.1209, and demonstrate compliance with the performance specifications for continuous monitoring systems. The testing must be completed within 60 days after the date of commencement. These tests shall be repeated at least once every 2.5 years from the date of this valid compliance demonstration.

#### **Comment #17**

Condition D.3.12(d) (Continuous Emissions Monitoring)

This condition should be deleted as unnecessary to demonstrate compliance.

#### **Response #17**

See response to comment #9. No changes have been made to the permit as a result of this comment.

#### **Comment #18**

Conditions D.3.14 (ESP Parametric Monitoring and ESP Inspections) and D.3.17(c)(3) (Record Keeping Requirements)

ESSROC would accept the measurement of total power, but the remainder of the condition should be deleted as unnecessary and overly burdensome.

ESSROC would like to use the parametric monitoring provision similar to the one in the ESSROC Speed permit for the ESP monitoring - 90% of the fields in operation. At Logansport, the 90% would be determined by measuring total power.

#### **Response #18**

IDEM agrees to revise the requirement to require measuring the number of T-R sets in service.

The ESP controlling the kilns must operate properly at all times to assure that the kilns maintain continuous compliance with all applicable requirements. In order to assure proper operation of the ESP, IDEM has included permit conditions requiring the Permittee to inspect the ESP periodically. IDEM believes that ESP inspections are necessary in order to prevent failures of the ESP. IDEM has moved the ESP inspection requirements to Condition D.3.8 (Preventive Maintenance Plans) and revised it as shown below. Revised Conditions D.3.8 and D.3.15 are shown below.

#### **D.3.8 Preventive Maintenance Plan [326 IAC 2-7-5(13)]**

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- (a)** A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and the control devices.
- (b)** **The PMP for an electrostatic precipitator shall include the following inspections, performed according to the indicated schedules:**
  - (1)** **Plate and electrode alignment, every major maintenance outage, but no less than every 14 months;**
  - (2)** **ESP TR set components, performed whenever there is an ESP outage of any nature lasting more than five days, unless such inspections have been performed within the last six months. At a minimum, the following inspections shall be performed:**
    - (A)** **Internal inspection of shell for corrosion (including but not limited to doors, hatches, insulator housings, and roof area).**
    - (B)** **Effectiveness of rapping (including but not limited to buildup of dust on discharge electrodes and plates).**
    - (C)** **Gas distribution (including but not limited to buildup of dust on distribution plates and turning vanes).**
    - (D)** **Dust accumulation (including but not limited to buildup of dust on shell and support members that could result in grounds or promote advanced corrosion).**
    - (E)** **Major misalignment of plates (including but not limited to a visual check of plate alignment).**
    - (F)** **Rapper, vibrator and TR set control cabinets (including but not**



limited to motors and lubrication).

- (G) Rapper assembly (including but not limited to loose bolts, ground wires, water in air lines, and solenoids).
  - (H) Vibrator and rapper seals (including but not limited to air in-leakage, wear, and deterioration).
  - (I) TR set controllers (including but not limited to low voltage trip point, over current trip point, and spark rate).
  - (J) Vibrator air pressure settings.
- (3) Air and water infiltration, once per month. The recommended method for this inspection is for audible checks around ash hoppers/hatches, duct expansion joints, and areas of corrosion.

Appropriate response steps for any failures, malfunctions, or abnormal conditions in the above list found during the inspection shall be taken in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

#### D.3.14 ESP Parametric Monitoring and ESP Inspections

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- (a) The ability of the ESP to control particulate emissions shall be monitored continuously, when the kilns are in operation, by measuring and recording the **number of T-R sets in service and the** ESP total power.
- ~~(a)(b)~~ ~~From the date of issuance of this permit until the approved stack test results are available,~~ appropriate **Reasonable** response steps shall be taken in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports whenever the ~~total power of the ESP is below 30.9 kW.~~ **percentage of T-R sets in service falls below 90 percent (90%).**

~~The Permittee shall determine the total power of the ESP from the most recent valid stack test as approved by IDEM, that demonstrates compliance with the limits in this permit.~~

~~On and after the date the approved stack test results are available appropriate response steps shall be taken in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports whenever the total power of the ESP is below the total power during the compliance stack test.~~

Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

- ~~(b)(c)~~ The instrument used for determining the total power shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every twelve (12) months.

~~(c) In order to document compliance with the applicable PM and dioxin/furan limits specified in Condition D.3.3 the following inspections shall be performed for the ESP during each annual shutdown, but no less often than once every 14 months, in accordance with the Preventive Maintenance Plan prepared in accordance with Section B - Preventive Maintenance Plan:~~

- ~~(2) Plate and electrode alignment;~~
- ~~(3) ESP component/controller failure;~~
- ~~(4) Air and water infiltration; and~~
- ~~(5) Calibration of the instruments used to determine the T-R set current and voltages.~~

~~All inspections shall be made whenever there is an outage of any nature lasting more than three days unless such measurements have been taken within the past three months.~~

~~Appropriate response steps for any failures, malfunctions, or abnormal conditions in the above list found during the inspection shall be taken in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.~~

#### **Comment #19**

Conditions D.3.16 and D.4.13 (Visible Emission Notations) must be deleted. The purposed authority for them is 326 IAC 2-7-5(3)(A)(iii) which refers to "requirements concerning the use, maintenance, and, where appropriate, installation of monitoring equipment or methods as necessary. Rule 326 IAC 3-5 provides for the use and maintenance of COMS and provides remedies if the agency reasonably believes that the equipment is malfunctioning or may be providing invalid data over an extended period. In light of this language, it is arbitrary and capricious for the agency to impose these requirements any time a COM is down for more than one hour. The TSD is devoid of any reason why conditions at Logansport plant make this provision necessary.

#### **Response #19**

ESSROC has kilns and clinker coolers which are required to measure opacity emissions using continuous opacity monitors (COMs) pursuant to 40 CFR 63, Subpart LLL, 40 CFR 63, Subpart EEE, and 326 IAC 3-5. These emission units are required to comply with stringent opacity limits, twenty percent (20%) and ten percent (10%) respectively for the kilns and clinker coolers. Considering these stringent opacity limits, and the requirement to continuously measure opacity from these units, a period of one (1) hour is an extended period of time for a COM to be malfunctioning or providing invalid data. In addition to the requirement to continuously monitor opacity, ESSROC is required to certify compliance with each condition in the permit. In order to be able to certify compliance, ESSROC must have sufficient information at its disposal to determine whether compliance was achieved. If a COM is malfunctioning for an extended period of time and no additional visible emissions notations are completed, ESSROC will not have sufficient information to determine compliance during the period of time when the COM was not functioning properly. 326 IAC 2-7-5 provides the authority to require additional monitoring when the COM is malfunctioning.

#### Comment #20

The descriptive information in D.6(a)(1) and (2) should be combined and should indicate that there are ten (10) hazardous waste-derived fuel storage tanks, installed in 1987 and 1994, with capacities ranging from 22,000 to 39,000 gallons.

#### Response #20

IDEM has made the requested changes, as shown below.

#### SECTION D.6 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

Insignificant Activity

##### Hazardous Waste fuel facilities

(a) Waste Management Units

- (1) ~~Six (6) receiving~~ **Ten (10) hazardous waste-derived fuel** storage tanks, installed in 1987 and 1994, with capacities ~~range ranging~~ from 22,000-39,000 gallons of liquid hazardous waste. All tanks are connected to an integrated emission control system.
- (2) ~~Four (4) blend/burn/storage tanks, installed in 1987, capacities: range from 22,000-39,000 gallons of liquid hazardous waste-derived fuel. All tanks are connected to an integrated emission control system.~~
- ~~(3)~~ (2) Carbon Steel Piping System
- ~~(4)~~ (3) Tank Rail Cars and Trucks

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

On September 30, 2003, Laurence A. McHugh of Barnes & Thornburg, on behalf of ESSROC Cement Corporation, provided additional written comments on the proposed permit. A summary of the comments and IDEM's responses is as follows (new text is shown in bold and deleted text is shown with strikeout):

#### Comment #1

Conditions D.1.1 and D.2.1

These conditions restate certain requirements of the process weight rate rule, 326 IAC 6-3, which provides emission limitations at a given process level. It is unnecessary to state the results of the calculation at a given process weight rate and the statement should be amended to reflect this.

#### Response #1

The condition is stated appropriately, and serves to indicate which individual facilities make up a single "manufacturing process" as defined by the rule.

#### Comment #2

D.1.6 (Testing Requirements) should be deleted because the stack to which it applies no longer exist.

## Response #2

Since these stacks no longer exist, the requirement to perform stack testing has been deleted. All subsequent conditions have been renumbered appropriately.

### ~~D.1.6 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]~~

~~Within 180 days after issuance of this permit, in order to demonstrate compliance with Condition D.1.3, the Permittee shall perform PM and PM10 testing on baghouse 136 (CE403) controlling the #1 recycled dust scoop/insufflation system (EU411) and baghouse 137 (CE420) controlling the #2 recycled dust scoop/insufflation system (EU420) utilizing methods as approved by the Commissioner. PM10 includes filterable and condensable PM10. Testing shall be conducted in accordance with Section C- Performance Testing.~~

## Comment #3

Conditions D.1.10, D.2.14, and D.4.11 (Broken or Failed Bag Detection)

In paragraph (a) delete the requirement to shutdown the operation if there are visible emissions and the event does not qualify as an emergency. In paragraph (b), the failed units and the associated process should not be required to shutdown unless there is an opacity exceedance. Add the phrase "and the failure results in an opacity exceedance" prior to "then the units and the associated process will be shut down. . .".

## Response #3

Paragraph (a) of Conditions D.1.10, D.2.14, and D.4.11 have been revised as follows:

In the event that bag failure has been observed.

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. ~~Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provisions).~~ Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of **deviation from this permit. If operations continue after bag failure is observed and it will be 10 days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.**

There has been no change to paragraph (b) of Conditions D.1.10, D.2.14, and D.4.11. If bag failure occurs in a multi-compartment baghouse, the affected compartment can be shutdown, while the rest of the baghouse continues to operate. However, with a single compartment baghouse, it is not possible isolate the failed bag and operate the rest of the baghouse effectively. All of these units rely on the proper operation of

a baghouse in order to comply with the applicable emission limits. Therefore, if the baghouse is not operating properly, it is very likely that the particulate mass emission rate could be exceeded. Compliance with the opacity limit does not assure compliance with the particulate mass emission limit.

#### **Comment #4**

In Condition D.2.10(b), change “the highest load or capacity level reasonably expected to occur within the day” to “representative performance conditions in accordance with 40 CFR 63.7(e). Also, the following paragraphs should be added to Condition D.2.10. What is currently paragraph (b) should become paragraph (d).

- (b) **The requirement to conduct Method 22 visible emissions monitoring under D.2.10 of this permit shall not apply to any totally enclosed conveying system transfer point, regardless of the location of the transfer point. “Totally enclosed conveying system transfer point” shall mean a conveying system transfer point that is enclosed on all sides, top, and bottom.**
- (c) **If any partially enclosed or unenclosed conveying system transfer point is located in a building, the Permittee shall have the option to conduct a Method 22 visible emissions monitoring test according to the requirements of paragraphs 40 CFR 63.1350(a)(4)(i) through (iv) for each such conveying system transfer point located within the building, or for the building itself [according to paragraph 40 CFR 63.1350(a)(4)(vii)]. If visible emissions from a building are monitored, the requirements of paragraphs 40 CFR 63.1350(a)(4)(i) through (iv) apply to the monitoring of the building, and the Permittee must also do the following: Test visible emissions from each side, roof and vent of the building for at least 1 minute. The test must be conducted under normal operating conditions.**
- (e) **The requirement under paragraph D.2.10(b) to conduct daily Method 22 testing shall not apply to any specific raw mill or finish mill equipped with a continuous opacity monitor (COM) or bag leak detection system (BLDS) installed in accordance with 40 CFR 63.1350(m).**

#### **Response #4**

IDEM agrees Condition D.2.10(b) should be revised to reflect the April 5, 2002 amendment to 40 CFR 63, Subpart LLL, which allows the Method 22 tests to be performed while the source is operating at the representative performance conditions in accordance with 40 CFR 63.7(e).

ESSROC does not have any totally enclosed conveying system transfer points; therefore it is not necessary to include language specifying what would or would not be required if such facilities existed at ESSROC.

Since ESSROC does have some partially enclosed or unenclosed conveying system transfer points that are located inside a building, IDEM agrees that the suggested paragraph (c) needs to be included in Condition D.2.10.

ESSROC does not have any COMS or bag leak detection systems installed on any of the stacks or baghouses controlling the raw mills or finish mills; therefore, it is not necessary to include a statement of

what would or would not apply if such devices were in place.

Paragraph (b) of Condition D.2.10 has been revised as shown below.

- (b) Pursuant to 40 CFR 63.1350 (Monitoring Requirements), the Permittee shall monitor opacity from the raw mills and finish mills by conducting daily visual emissions observations of the mill sweep and air separator particulate matter control devices (PMCDs), in accordance with the procedures of 40 CFR 60, Appendix A, Method 22. The Method 22 test shall be conducted while the affected source is operating at the ~~highest load or capacity level reasonably expected to occur within the day~~ **representative performance conditions in accordance with 40 CFR 63.7(e)**. The duration of the Method 22 test shall be six minutes. If visible emissions are observed during any Method 22 visible emissions test, the Permittee must initiate, within one (1) hour, the corrective actions specified in the site specific operations and maintenance plan developed in accordance with 40 CFR 63.1350(a)(1) and (a)(2); and conduct a follow-up Method 22 test. If visible emissions are observed, then within 24 hours of the end of the Method 22 test in which the visible emissions were observed, the Permittee must conduct a followup Method 22 test of each stack from which visible emissions were observed during the previous Method 22 test. If visible emissions are observed during the followup Method 22 test, the Permittee must conduct a visual opacity test of each stack from which visible emissions were observed during the followup Method 22 test, in accordance with 40 CFR 60, Appendix A, Method 9. The duration of the Method 9 test shall be thirty minutes.

Paragraph (c) has been added to the condition as shown below.

- (c) **For any partially enclosed or unenclosed conveying system transfer point located in a building, the Permittee shall have the option to conduct a Method 22 visible emissions monitoring test according to the requirements of paragraphs 40 CFR 63.1350(a)(4)(i) through (iv) for each such conveying system transfer point located within the building, or for the building itself [according to paragraph 40 CFR 63.1350(a)(4)(vii)]. If visible emissions from a building are monitored, the requirements of paragraphs 40 CFR 63.1350(a)(4)(i) through (iv) apply to the monitoring of the building, and the Permittee must also do the following: Test visible emissions from each side, roof and vent of the building for at least 1 minute. The test must be conducted under normal operating conditions.**

#### Comment #5

Condition D.2.16 and D.4.15 (Reporting Requirements) should be modified to require the O&M Plan to be submitted within thirty (30) days of permit issuance, and remove the requirement to submit reports to the EPA where not required.

#### Response #5

40 CFR 63.1350(a) states that the O&M plan shall be submitted to the Administrator for review and approval as part of the application for a part 70 permit. Since ESSROC had already submitted its Part 70 permit prior to the compliance date of 40 CFR 63, Subpart LLL, the due date for submitting the O&M plan would be the compliance date of the rule.

The O&M Plan must also be submitted to EPA. IDEM has not yet incorporated the NESHAP into the SIP;

therefore, at this time, EPA is responsible for enforcing the NESHAP.

There have been no changes to the permit as a result of this comment.

#### Comment #6

Conditions D.3.3(1) and D.3.4(c) should be revised to state the dioxin/furan limit as follows:

Dioxin/Furan emissions shall be limited to 0.20 nanograms (TEQ) per dry standard cubic meter corrected to 7 percent oxygen; or 0.40 nanograms (TEQ) per dry standard cubic meter corrected to 7 percent oxygen provided that the combustion gas temperature at the inlet to the dry particulate matter control device is 400 degrees Fahrenheit or lower based on the average of the test run average temperatures.

#### Response #6

IDEM agrees to make the requested changes.

#### D.3.3 NESHAP Emissions Limitation [40 CFR Part 63, Subpart EEE]

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Pursuant to 40 CFR 63.1204 (Emissions Standards and Operating Limits), on and after September 30, 2002, which is the compliance date for the National Emission Standards for Hazardous Air Pollutants (NESHAP) for the Hazardous Waste Combustors, kiln #1 and kiln #2 shall be limited as follows:

- (1) Dioxin/Furan emissions shall be limited to ~~8.7 x 10<sup>-11</sup> grains per dry standard cubic foot~~ **0.20 nanograms (TEQ) per dry standard cubic meter** corrected to seven percent oxygen; or ~~1.7 x 10<sup>-10</sup> grains per dry standard cubic foot~~ **0.40 nanograms (TEQ) per dry standard cubic meter** corrected to seven percent oxygen, **provided that when the average of the performance test run the average combustion gas temperatures at the inlet to the particulate matter control device is 400 degrees Fahrenheit or less lower based on the average of the test run average temperatures.**

#### D.3.4 Alternate Emission Limitations [40 CFR Part 63.1206, Subpart EEE]

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- (I) Pursuant to 40 CFR 63, Subpart EEE, the emission standards and operating requirements of 40 CFR 63, Subpart EEE, shall not apply during those periods of operation when hazardous waste is not in the combustion chamber and the Permittee has:
- (II) During those periods of operation when hazardous waste is not in the combustion chamber and the Permittee has complied with (a) and (b) above, the following conditions shall apply instead of the limits listed in Condition D.3.3.
- (a) Particulate matter (PM) emissions shall be limited to 0.30 pound per ton of feed (dry basis) to each kiln.
- (b) Visible emissions shall be limited to twenty percent (20%) opacity.
- (c) Dioxin/Furan emissions shall be limited to ~~8.7 x 10<sup>-11</sup> grains per dry standard cubic foot~~ **0.20 nanograms (TEQ) per dry standard cubic meter** corrected to seven percent oxygen; or ~~1.7 x 10<sup>-10</sup> grains per dry standard cubic foot~~ **0.40 nanograms (TEQ) per dry standard cubic meter** corrected to seven percent oxygen,

**provided that when the average of the performance test run the average combustion gas temperatures at the inlet to the particulate matter control device is 400 degrees Fahrenheit or less lower based on the average of the test run average temperatures.**

#### **Comment #7**

Condition D.3.3(3) should be revised to state that the lead and cadmium combined emission limit is 330 micrograms/dscm, corrected to seven percent oxygen.

#### **Response #7**

The original Hazardous Waste Combustor (HWC) MACT rule, promulgated on September 30, 1999, established a limit of 240 micrograms/dscm for lead and cadmium emissions. However, on July 24, 2001, the District of Columbia Circuit (the Court) granted the Sierra Club's petition for review and vacated the challenged portions of the rule. Effective February 13, 2002, EPA issued interim standards that would apply to those sources subject to the HWC MACT rule. The interim standards mostly mirrored the standards established by the original HWC MACT rule, with only a few changes. One of those changes was to allow an emission limit of 330 micrograms/dscm for semi-volatile metals. As a result, IDEM agrees to make the suggested change.

#### **D.3.3 NESHAP Emissions Limitation [40 CFR Part 63, Subpart EEE]**

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Pursuant to 40 CFR 63.1204 (Emissions Standards and Operating Limits), on and after September 30, 2002, which is the compliance date for the National Emission Standards for Hazardous Air Pollutants (NESHAP) for the Hazardous Waste Combustors, kiln #1 and kiln #2 shall be limited as follows:

- (3) Lead and cadmium combined emissions shall be limited to ~~240~~ **330** micrograms/dscm corrected to seven percent oxygen.

#### **Comment #8**

Delete paragraph (a) of Condition D.3.4 (Alternate Emission Limitations).

#### **Response #8**

The requirement to submit a one-time written notice to the Administrator documenting compliance with all applicable requirement and standards promulgated under authority of the Clean Air Act, including Sections 112 and 129, was an applicable requirement pursuant to 40 CFR 63.1206(b)(ii)(A). However, the rule was amended on July 3, 2001. This amendment to the rule removed this requirement. Therefore, IDEM agrees to delete the requirement from the permit.

#### **D.3.4 Alternate Emission Limitations [40 CFR Part 63.1206, Subpart EEE]**

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- (i) Pursuant to 40 CFR 63, Subpart EEE, the emission standards and operating requirements of 40 CFR 63, Subpart EEE, shall not apply during those periods of operation when hazardous waste is not in the combustion chamber and the Permittee has:

- ~~(a) Submitted a one time written notice to the Administrator documenting compliance with all applicable requirements and standards promulgated under authority of the Clean Air Act, including Sections 112 and 129; and~~



~~(b)~~ ~~Documented~~ **documented** in the operating record that the source is complying with such applicable requirements in lieu of the emission standards and operating requirements of this subpart.

#### Comment #9

##### Condition D.3.6

- (1) Include a statement that says the Permittee shall be exempt from the requirements of 40 CFR 61.342(b) and (c) and Section D.3.6 of this permit, if the total annual benzene quantity from the facility waste is less than 10 megagrams per year (Mg/yr).
- (2) Instead of listing only the compliance option ESSROC currently uses, the permit should allow for any of the methods described in 40 CFR 61.348(a)(1)(i), (ii), and/or (iii).
- (3) Include the following language as paragraph (c)(1):

A treatment process is in compliance with the requirements of 40 CFR 61.348(c) and condition D.3.6(c) of this permit and exempt from the requirements of 40 CFR 61.348(c) and condition D.3.6(c) of this permit provided that the Permittee documents that the treatment process or waste stream is in compliance with 40 CFR 61.348(c)(1), (2), (3), (4) or (5).
- (4) Change D.3.6(d) to state the following:

Pursuant to 40 CFR 61.348(e) except as specified in paragraph 40 CFR 61.348(e)(3), if the treatment process has any openings (e.g. access doors, hatches, etc.), all such openings shall be sealed (gasketed, latched, etc.) and kept closed at all times when the waste is being treated, except during inspection and maintenance.
- (5) Change D.3.6(e) to state the following:

Pursuant to 40 CFR 61.348(g), except for a treatment process or waste stream complying with 40 CFR 61.348(d), the treatment process that is used to comply with the provisions of 40 CFR 61.348 and section D.3.6 of this permit shall monitor the unit in accordance with the applicable requirements of 40 CFR 61.354.

#### Response #9

IDEM agrees to make the suggestions changes as shown below.

##### D.3.6 National Emission Standard for Benzene Waste Operations [40 CFR Part 61, Subpart FF]

Pursuant to 40 CFR 61, Subpart FF - National Emissions Standard for Benzene Waste Operations, the Permittee shall **be exempt from the requirements of 40 CFR 61.342(b) and (c) and Condition D.3.6 of this permit, if the total annual benzene quantity from the facility waste is less than 10 megagrams per year (Mg/yr).**

- (a) **The Permittee shall** design, install, operate and maintain the kilns to destroy the benzene contained in waste streams meeting the criteria specified in 40 CFR 61.340(b).
- ~~(a)(b)~~ Pursuant to 40 CFR 61.348(a)(1)(iii), the Permittee shall destroy the benzene in the waste

stream by **utilizing one of the methods described in 40 CFR 61.348(a)(1)(i), (ii), and/or (iii) incinerating the waste in a cement kiln that achieves a destruction efficiency of ninety-nine percent (99%) or greater for benzene.**

~~(b)~~**(c)** As provided in 40 CFR 61.348(a)(4), the Permittee may aggregate or mix together individual waste streams to create a combined waste stream for the purpose of facilitating treatment of waste to comply with part (a) of this condition.

~~(c)~~**(d)** Pursuant to 40 CFR 61.348(c), the Permittee shall demonstrate that each ~~cement kiln treatment process, except as provided by 40 CFR 61.348(d), achieves the appropriate conditions specified in 40 CFR 61.348(a) or (b) in accordance with 40 CFR 61.348(c)(1) or (2) ninety-nine percent (99%) destruction efficiency by conducting performance tests using test methods and procedures specified in 40 CFR 61.355(f) and condition D.3.9.~~

**(1) A treatment process is in compliance with the requirements of 40 CFR 61.348(c) and Condition D.3.6(c) of this permit provided that the Permittee documents that the treatment process or waste stream is in compliance with 40 CFR 61.348(c)(1), (2), (3), (4) or (5).**

~~(d)~~**(e)** Pursuant to 40 CFR 61.348(e)~~(3)~~, **except as specified in paragraph 40 CFR 61.348(e)(3), if the treatment process has any openings (e.g., access doors, hatches, etc.), all such openings shall be sealed (gasketed, latched, etc.) and kept closed at all times when the waste is being treated, except during inspection and maintenance.** ~~the Permittee may operate the cement kilns with an opening that is not sealed and kept closed at all times if the cover and closed-vent system operate such that the cement kilns are maintained at a pressure less than atmospheric pressure and the following conditions are met:~~

~~\_\_\_\_\_ (1) The purpose of the opening is to provide dilution air to reduce the explosion hazard;~~

~~\_\_\_\_\_ (2) The opening is designed to operate with no detectable emissions as indicated by a instrument reading of less than 500 ppmv above background, as determined at least once per year by the methods specified in 40 CFR 60.355(h) and condition D.3.9; and~~

~~\_\_\_\_\_ (3) The pressure is monitored continuously to ensure that the pressure in the treatment process unit remains below atmospheric pressure.~~

**(e)(f)** Pursuant to 40 CFR 61.348(g), **except for a treatment process or waste stream complying with 40 CFR 61.348(d), the treatment process that is used to comply with the provisions of 40 CFR 61.348 and Section D.3.6 of this permit shall monitor the unit in accordance with the applicable requirements of 40 CFR 61.354.** ~~the Permittee shall monitor the cement kilns in accordance with the applicable requirements in 40 CFR 61.354(a)(2) and the following:~~

~~\_\_\_\_\_ (1) The Permittee shall install, calibrate, operate, and maintain according to manufacturer's specifications equipment to continuously monitor and record a process parameter (or parameters) that indicates proper system operation.~~

~~(2) The Permittee shall inspect at least once each operating day the data recorded by the equipment to ensure that the kilns are operating properly.~~

#### Comment #10

##### D.3.9 (Testing Requirements)

Revise paragraph (a) to say “unless an extension request has been submitted or granted under 40 CFR 63.1213 and 40 CFR 63.6(i)(4)(B) and (C). Also delete the requirement to repeat the testing every 2.5 years.

Revise (b)(3) to say the kiln feed will be measured instead of clinker production rate. Delete (b)(5). Delete paragraphs (c) and (d).

#### Response #10

ESSROC has not been granted an extension under 40 CFR 63.1213 and 40 CFR 63.6(i)(4)(B) and (C); therefore, there is no need to include such a statement. If ESSROC is granted such an extension, a permit modification can be issued to reflect the revised compliance date.

IDEM agrees to revise (b)(3) to say the kiln feed rate will be measured instead of clinker production.

Since Essroc has applied for a waiver of the testing required by paragraph (c) of this condition, and the request is still under consideration by EPA, paragraph (c) of this condition has been changed as shown below.

Since Essroc has been issued a final BIF permit, 40 CFR 61.348(e)(3) no longer applies; therefore, paragraph (d) has been deleted.

##### D.3.9 Testing Requirements [40 CFR 63, Subpart EEE] [326 IAC 2-7-6(1),(6)] [326 IAC 2-1-3(i)(8)] [326 IAC 2-1.1-11]

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- (b) During each stack test required above, the following items shall be performed:
  - (1) Certified continuous opacity monitoring (COM) data shall be observed and recorded or EPA Method 9 opacity tests shall be performed.
  - (2) The kiln temperature and oxygen concentration shall be measured and recorded.
  - (3) The ~~clinker production~~ **kiln feed** rate shall be measured and recorded.
  - (4) Pursuant to 326 IAC 3-6-3(b)(2), 40 CFR 63.7(e) and 40 CFR 63.1207(g), the tests shall be conducted under representative operating conditions.
  - (5) Pursuant to 326 IAC 3-6-3(b), during the performance tests, each kiln and clinker cooler must be operating at 95 percent of its maximum production capacity or more, or under other capacities or conditions specified and approved by IDEM, to be considered a valid test.

- (c) ~~Within 180 days after permit issuance~~ **Unless EPA grants a waiver of the test requirement, in order to demonstrate compliance with Condition D.3.6,** the Permittee shall demonstrate that each cement kiln achieves ninety-nine percent (99%) destruction efficiency by conducting performance tests using test methods and procedures specified in 40 CFR 61.355(f), **in order to demonstrate compliance with Condition D.3.6. This testing shall be performed at the same time as the testing required by paragraph (a) of this condition.**
- (d) ~~Pursuant to 40 CFR 61.348(e)(3), the Permittee must demonstrate no detectable emissions for openings in the cement kiln by performing a test, at least once per year, in accordance with 40 CFR 61.355(h).~~

#### Comment #11

##### D.3.12 (Continuous Emissions Monitoring)

Paragraph (b) should reference either the CO or hydrocarbon limits (as applicable). If IDEM must select only one option, it should acknowledge ESSROC's choice to demonstrate compliance with only the hydrocarbon limit pursuant to 40 CFR 63.1204(a)(5)(ii)(A).

Delete D.3.12(d). A CO CEMS is not required by the NESHAP. In any event, these types of requirements belong in the startup, shutdown, and malfunction plan, not in the permit.

#### Response #11

IDEM has changed paragraph (b) such that it references only the hydrocarbon limits.

40 CFR 63.1209 states "You must use a CEMS to demonstrate and monitor compliance with the carbon monoxide and hydrocarbon standards under this subpart. You must also use an oxygen CEMS to continuously correct the carbon monoxide and hydrocarbon levels to 7 percent oxygen." Condition D.3.12 has been changed as follows:

##### D.3.12 Continuous Emissions Monitoring [326 IAC 3-5] [40 CFR 63, Subpart EEE] [326 IAC 2-7-6(1),(6)]

- (b) Pursuant to 40 CFR 63, Subpart EEE, a continuous monitoring system shall be installed, calibrated, maintained, and operated to demonstrate compliance with the ~~carbon monoxide and~~ hydrocarbon limits specified in 40 CFR 63 and Condition D.3.3. An oxygen CEMS shall also be installed, calibrated, maintained, and operated to continuously correct the ~~carbon monoxide and~~ hydrocarbon levels to 7 percent oxygen.
- (d) In the event that a ~~CO~~ CEMS fails, the Permittee shall monitor the oxygen content and temperature of the kiln exhaust at least once per hour. If the oxygen content or temperature is outside the range established in the latest compliance stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a ~~violation of~~ **deviation from** this permit.

Additionally, to acknowledge that ESSROC has opted to comply with the hydrocarbon limit, Condition D.3.3(5) has been revised as shown below.

**D.3.3 NESHAP Emissions Limitation [40 CFR Part 63, Subpart EEE]**

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Pursuant to 40 CFR 63.1204 (Emissions Standards and Operating Limits), on and after September 30, 2002, which is the compliance date for the National Emission Standards for Hazardous Air Pollutants (NESHAP) for the Hazardous Waste Combustors, kiln #1 and kiln #2 shall be limited as follows:

- (5) ~~Carbon monoxide and hydrocarbon emissions shall comply with either (A) or (B) below:~~
- (A) ~~Hydrocarbons in the main stack shall not exceed 20 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to seven percent oxygen, and reported as propane; or~~
- (B) ~~Carbon monoxide in the main stack shall not exceed 100 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis and corrected to seven percent oxygen; and in addition, during the destruction and removal efficiency (DRE) test runs or their equivalent as provided by 40 CFR 63.1206(b)(7), hydrocarbons shall not exceed 20 parts per million by volume over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to seven percent oxygen, and reported as propane.~~

**Comment #12**

Condition D.3.13 (NESHAP Monitoring Requirements)

Revise paragraph (a) to say “unless an extension request has been submitted or granted under 40 CFR 63.1213 and 40 CFR 63.6(i)(4)(B) and (C).

**Response #12**

ESSROC has not been granted an extension under 40 CFR 63.1213 and 40 CFR 63.6(i)(4)(B) and (C); therefore, there is no need to include such a statement. If ESSROC is granted such an extension, a permit modification can be issued to reflect the revised compliance date.

**Comment #13**

Delete Conditions D.3.15(a) and D.4.12. These requirements belong in the startup, shutdown, malfunction plan, not in the permit.

**Response #13**

IDEM agrees to delete Conditions D.3.15 and D.4.12.

**D.3.15 Opacity Readings**

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~~The ability of the ESP to control particulate emissions shall be monitored by continuously measuring and recording the opacity of emissions from the kiln stack exhaust (EP401).~~

- ~~———— (a) ———— Appropriate response steps shall be taken in accordance with Section C — Compliance Response Plan — Preparation, Implementation, Records, and Reports whenever the opacity exceeds 18 percent. Failure to take response steps in accordance with Section C — Compliance Response Plan — Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit. —~~
- ~~———— (b) ———— The opacity shall be determined by the certified continuous opacity monitor required in Condition D.3.12. —~~

#### D.4.12 Opacity Readings

- ~~———— The ability of the ESPs and baghouses to control particulate emissions from the kilns and clinker coolers shall be monitored by continuously measuring and recording the opacity of emissions from the stack exhausts. —~~
- ~~———— (a) ———— Appropriate response steps shall be taken in accordance with Section C — Compliance Response Plan — Preparation, Implementation, Records, and Reports whenever the opacity from a clinker cooler exceeds 8 percent. Failure to take response steps in accordance with Section C — Compliance Response Plan — Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit. —~~
- ~~———— (b) ———— The opacity shall be determined by the certified continuous opacity monitor required in Condition D.4.6. —~~

#### **Comment #14**

Conditions D.3.16 and D.4.13 (Visible Emission Notations)

Paragraph (a) should clarify that VE's and/or Method 9 readings are not required unless the process is operating. In (a)(2), delete "of shutdown or malfunction of the primary COM.

#### **Response #14**

IDEM agrees to make the requested changes. The revised conditions are shown below.

#### D.3.16 Visible Emissions Notations

- (a) Whenever a continuous opacity monitor (COM) is malfunctioning or will be down for calibration, maintenance, or repairs for a period of one (1) hour or more, **and the process is operating**, compliance with the applicable opacity limits shall be demonstrated by the following:
- (1) Visible emission (VE) notations shall be performed once per hour during daylight operations following the shutdown or malfunction of the primary COM. A trained employee shall record whether emissions are normal or abnormal for the state of operation of the emission unit at the time of the reading.
- (A) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (B) If abnormal emissions are noted during two consecutive emission

notations, the Permittee shall begin Method 9 opacity observations within four hours of the second abnormal notation.

- (C) VE notations may be discontinued once a COM is online or formal Method 9 readings have been implemented.
- (2) If a COM is not online within twenty-four (24) hours of ~~shutdown or malfunction of the primary COM~~, the Permittee shall provide certified opacity reader(s), who may be employees of the Permittee or independent contractors, to self-monitor the emissions from the emission unit stack.
  - (A) Visible emission readings shall be performed in accordance with 40 CFR 60, Appendix A, Method 9, for a minimum of five (5) consecutive six (6) minute averaging periods beginning not more than twenty-four (24) hours after the start of the malfunction or down time.
  - (B) Method 9 opacity readings shall be repeated for a minimum of five (5) consecutive six (6) minute averaging periods at least once every four (4) hours during daylight operations, until such time that a COM is in operation.
  - (C) Method 9 readings may be discontinued once a COM is online.
  - (D) Any opacity exceedances determined by Method 9 readings shall be reported with the Quarterly Opacity Exceedances Reports.
- (3) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. Observation of abnormal emissions that do not violate an applicable opacity limit is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a ~~violation of~~ **deviation from** this permit.
- (b) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous opacity monitoring system pursuant to 326 IAC 3-5 and 40 CFR 63, Subpart EEE.

#### D.4.13 Visible Emissions Notations

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- (a) Whenever a continuous opacity monitor (COM) is malfunctioning or will be down for calibration, maintenance, or repairs for a period of one (1) hour or more, **and the process is operating**, compliance with the applicable opacity limits shall be demonstrated by the following:
  - (1) Visible emission (VE) notations shall be performed once per hour during daylight operations following the shutdown or malfunction of the primary COM. A trained employee shall record whether emissions are normal or abnormal for the state of operation of the emission unit at the time of the reading.
    - (A) A trained employee is an employee who has worked at the plant at least

- one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (B) If abnormal emissions are noted during two consecutive emission notations, the Permittee shall begin Method 9 opacity observations within four hours of the second abnormal notation.
  - (C) VE notations may be discontinued once a COM is online or formal Method 9 readings have been implemented.
- (2) If a COM is not online within twenty-four (24) hours ~~of shutdown or malfunction of the primary COM~~, the Permittee shall provide certified opacity reader(s), who may be employees of the Permittee or independent contractors, to self-monitor the emissions from the emission unit stack.
- (A) Visible emission readings shall be performed in accordance with 40 CFR 60, Appendix A, Method 9, for a minimum of five (5) consecutive six (6) minute averaging periods beginning not more than twenty-four (24) hours after the start of the malfunction or down time.
  - (B) Method 9 opacity readings shall be repeated for a minimum of five (5) consecutive six (6) minute averaging periods at least once every four (4) hours during daylight operations, until such time that a COM is in operation.
  - (C) Method 9 readings may be discontinued once a COM is online.
  - (D) Any opacity exceedances determined by Method 9 readings shall be reported with the Quarterly Opacity Exceedances Reports.
- (3) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. Observation of abnormal emissions that do not violate an applicable opacity limit is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a ~~violation of~~ **deviation from** this permit.
- (b) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous opacity monitoring system pursuant to 326 IAC 3-5, 40 CFR 63, Subpart LLL.

#### Comment #15

##### Condition D.3.17 (Record Keeping Requirements)

In paragraph (d), change "NESHAP" to "HWC MACT" and delete the compliance date.

#### Response #15



The rule is a National Emission Standards for Hazardous Air Pollutants (NESHAP); therefore, IDEM does not agree that it is appropriate to reference the rule as "MACT" instead of "NESHAP." However, for clarification purposes, the reference has been changed to "HWC NESHAP."

#### D.3.16 Record Keeping Requirements

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- (d) To document compliance with the **HWC NESHAP**, the Permittee shall maintain all records required by 40 CFR 63.1210 and 40 CFR 63.1211, including, but not limited to, the following:
  - (1) The Permittee shall maintain files of all information (including all reports and notifications) required by this rule recorded in a form suitable and readily available for inspection and review as required by 40 CFR 63.10(b)(1).
  - (2) The Permittee shall maintain records for each affected source as required by 40 CFR 63.10(b)(2) and (3) including:
    - (A) All documentation supporting initial notifications and notifications of compliance status under 40 CFR 63.9.
    - (B) All records of applicability determination, including supporting analyses.
  - (3) The Permittee shall maintain all records of continuous monitoring system data required by 40 CFR 63.10(c).

#### Comment #16

##### Condition D.3.17 (Record Keeping Requirements)

In paragraph (e) include "Unless exempt from the requirements of condition D.3.6 of this permit, the Permittee shall maintain the following records, where applicable:".

Relabel what is now in paragraph (e) to (e)(1).

Add (e)(2) as follows:

Pursuant to 40 CFR 61.356(e)(2), if engineering calculations are used, the Permittee shall maintain all records necessary to demonstrate the cement kiln performance as specified in 40 CFR 61.356(e)(2).

In (f), include the phrase "if performance tests are used".

Relabel (f) and (g) as (e)(3) and (e)(4). Relabel (h) and (i) as (f) and (g).

#### Response #16

These facilities are not exempt from the requirement of Condition D.3.6; therefore, it is not appropriate to include the suggested language.

IDEM agrees to make the other suggested changes, as shown below. The condition has been renumbered

D.3.16.

D.3.16 Record Keeping Requirements

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- (e) **The Permittee shall maintain the following records:**
- (1) Pursuant to 40 CFR 61.356(e)(1), the Permittee shall maintain a statement signed and dated by the Permittee certifying that the treatment unit (cement kiln) is designed to operate at the documented performance level when the waste stream entering the unit is at the highest stream flow rate and benzene content expected to occur. The documentation shall be retained for the life of the cement kilns.
  - (2) **Pursuant to 40 CFR 61.356(e)(2), if engineering calculations are used, the Permittee shall maintain all records necessary to demonstrate the cement kiln performance as specified in 40 CFR 61.356(e)(2).**
  - ~~(f)~~ (3) Pursuant to 40 CFR 61.356(e)(3), **if performance tests are used**, the Permittee shall maintain all test information necessary to demonstrate the cement kiln performance as specified in 40 CFR 61.356(e)(3)(i) through (iv).
  - ~~(g)~~ (4) Pursuant to 40 CFR 61.356(i), the Permittee shall maintain documentation that includes the following information regarding the cement kiln operation:
    - ~~(4)~~ (A) Dates of startup and shutdown of the units.
    - ~~(2)~~ (B) For a process parameter monitored in accordance with 40 CFR 61.354(a)(2), the Permittee shall maintain records that include a description of the operating parameter (or parameters) to be monitored to ensure that the units will be operated in conformance with the standard in 40 CFR 61.348(c) and the units' design specifications, and an explanation of the criteria used for selection of that parameter (or parameters). This documentation shall be kept for the life of the equipment.
    - ~~(3)~~ (C) Periods when the units are not operated as designed.
  - ~~(h)~~ (f) To document compliance with Condition D.3.8, the Permittee shall maintain records of any additional inspections prescribed by the Preventive Maintenance Plan.
  - ~~(i)~~ (g) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

**Comment #17**

Condition D.3.18 (Reporting Requirements)

Revise paragraph (c) to say "unless an extension request has been submitted or granted under 40 CFR 63.1213 and 40 CFR 63.6(i)(4)(B) and (C).

Revise paragraph (f) to require the reporting annually as specified in 40 CFR 61.357(d)(2).

### Response #17

ESSROC has not been granted an extension under 40 CFR 63.1213 and 40 CFR 63.6(i)(4)(B) and (C); therefore, there is no need to include such a statement. If ESSROC is granted such an extension, a permit modification can be issued to reflect the revised compliance date.

IDEM agrees that 40 CFR 61.357(d)(2) requires the report to be submitted annually. The following change has been made to paragraph (f) of the condition. The condition has been renumbered D.3.17.

- (f) Pursuant to 40 CFR 61.357(d)(2), the Permittee shall submit to the US EPA and IDEM, OAQ ~~a quarterly~~ **an annual** report containing the following information:

### Comment #18

Condition D.3.18 (Reporting Requirements)

Revise paragraph (f) to say "Unless exempt from the requirements of condition D.3.6 of this permit". Delete the requirement to submit reports to EPA.

Include all reporting options, not just those for facilities that have total annual benzene waste equal to or greater than 10 Mg/yr (11 tons/yr).

Additionally, these reports do not need to be submitted to the US EPA.

### Response #18

These facilities are not exempt from the requirement of Condition D.3.6; therefore, it is not appropriate to include the suggested language.

Since the amount of benzene waste can vary each year, depending on the customers that ESSROC serves, IDEM agrees to include those compliance options that would apply if the benzene waste is less than 10 Mg/yr.

The reports listed in this condition must be submitted to EPA. IDEM has not yet incorporated the NESHAPs into the SIP; therefore, EPA is still responsible for enforcing the NESHAPs.

The revised Condition is shown below.

#### D.3.17 Reporting Requirements

- (f) Pursuant to 40 CFR 61.357(d)(7)(ii) and (v), the Permittee shall submit to the US EPA and IDEM, OAQ a quarterly report containing the following information:
- (1) ~~Each 3-hour period of operation during which the average value of the monitored parameter required in D.3.7(e) is outside the range of acceptable values or during which one or both of the cement kilns is not operating as designed~~ **If the total annual benzene quantity from the facility waste is less than 1 Mg/yr (1.1 ton/yr), the applicable reporting requirements of 40 CFR 61.357(b);**

- (2) ~~Any period in which the pressure in cement kiln is equal to or greater than atmospheric pressure.~~ **If the total annual benzene quantity from the facility waste is less than 10 Mg/yr (11 ton/yr) but is equal to or greater than 1 Mg/yr (1.1 tons/yr), the applicable reporting requirements of 40 CFR 61.357(c);**
- (3) **If the total annual benzene quantity from the facility waste is equal to or greater than 10 Mg/yr (11 ton/yr), the applicable reporting requirements of 40 CFR 61.357(d).**

#### Comment #19

Condition D.4.4 (Preventive Maintenance Plan)

Change the second sentence to state "The Operations and Maintenance Plan required by Condition D.4.9 and developed in accordance with Section B - Preventive Maintenance Plan shall satisfy this condition.

#### Response #19

IDEM has deleted the last sentence of Condition D.4.4 because Condition B.10 (Preventive Maintenance Plan) already explains that, to the extent the Permittee is required to have an O&M Plan, such plan can satisfy the requirement to have a PMP.

#### D.4.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

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A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and their control devices. ~~If the Operations and Maintenance Plan required by Condition D.4.8 is developed in accordance with Section B - Preventive Maintenance Plan, then after June 14, 2002, the Operations and Maintenance Plan shall satisfy this condition.~~

The same change has also been made to Conditions D.2.7 and D.3.8.

#### D.2.7 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

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A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the control devices listed in this section. ~~If the Operations and Maintenance Plan required by Condition D.2.10 is developed in accordance with Section B - Preventive Maintenance Plan, then after June 14, 2002, the Operations and Maintenance Plan shall satisfy this condition.~~

#### D.3.8 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

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A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and the control devices. ~~If the Operations and Maintenance Plan required by Condition D.3.13 is developed in accordance with Section B - Preventive Maintenance Plan, then after September 30, 2002, the Operations and Maintenance Plan shall satisfy this condition.~~

#### Comment #20

Condition D.4.6 (Continuous Emissions Monitoring)

Delete references to 40 CFR 60 because the NSPS no longer applies to the clinker coolers.

#### Response #20

IDEM agrees. The condition has been changed as shown below.

D.4.6 Continuous Emissions Monitoring [326 IAC 3-5] [40 CFR 60, Subpart F] [326 IAC 2-7-6(1),(6)]  
Pursuant to 326 IAC 3-5 (Continuous Monitoring of Emissions), 326 IAC 2-1.1-11, **and** 40 CFR Part 63, Subpart LLL, ~~and 40 CFR Part 60 (for clinker cooler #2)~~; a continuous monitoring system shall be installed, calibrated, maintained, and operated for measuring opacity from the clinker coolers. The continuous monitoring systems shall meet the performance specifications of 326 IAC 3-5-2 and shall demonstrate continuous compliance with Section C - Opacity, and Condition D.4.2(b).

#### Comment #21

Condition D.6.3

Add paragraph (a) as follows:

Pursuant to 40 CFR 63.680(b)(2)(vi), off-site materials that meet the exemption criteria and are managed at the Permittee's facility in units (tanks, containers (tank rail cars and trucks), and transfer systems (piping system)), are exempt from requirements of controlling air emissions in accordance with 40 CFR 63.683 through 63.689.

In paragraph (1), change "since" to "if".

#### Response #21

IDEM agrees to make the suggested changes.

D.6.3 Off-site Waste and Recovery Operations NESHAP [326 IAC 20-23-1] [40 CFR Part 63, Subpart DD] [40 CFR 61, Subpart FF]

These facilities are subject to 40 CFR Part 63, Subpart DD, which is incorporated by reference as 326 IAC 20-23-1, with a compliance date of February 1, 2000.

**(a) Pursuant to 40 CFR 63.680(b)(2)(vi), off-site materials that meet the exemption criteria and are managed at the Permittee's facility in units (tanks, containers (tank rail cars and trucks), and transfer systems (piping system)), are exempt from the requirements of controlling air emissions in accordance with 40 CFR 63.683 through 63.689.**

~~(a)~~**(b)** Pursuant to 40 CFR 63.683(b)(1)(i), the Permittee shall control the air emissions from each affected off-site material management unit (tanks, containers (tank rail cars and trucks), and transfer systems (piping system)) in accordance with the provisions listed below:

(1) Pursuant to 40 CFR 63.683(b)(2)(i), ~~since~~ **if** the off-site material management units, identified as (a) in the description box in this Section, are subject to 40 CFR 61, Subpart FF and the Permittee is controlling the HAPs listed in 40 CFR Part 63, Subpart DD, Table 1 that are emitted from the unit in compliance with the

provisions specified in 40 CFR Part 61, Subpart FF, the off-site material management units are exempt from the requirements of controlling air emissions in accordance with 40 CFR 63.685 through 63.689.

- (2) Pursuant to 40 CFR 63.689(c)(2) and 40 CFR 63.683(b)(1)(i), the Permittee shall control air emissions by operating a transfer system, identified as (a)(3) in the description box in this section, that consists of continuous hard-piping. All joints or seams between the pipe sections shall be permanently or semi-permanently sealed (e.g., a welded joint between two sections of metal pipe or a bolted and gasketed flange).
- (b)(c) Pursuant to 40 CFR 63.683(d), the Permittee shall control equipment leaks from each equipment component, identified as (b) in the description box in this section, that is part of the affected source specified in 40 CFR 63.680(c)(3) by implementing leak detection and control measures in accordance with the standards specified in 40 CFR 63.691(b) and condition D.6.4 and D.6.5.

#### Comment #22

Condition D.6.4 (National Emission Standard for Equipment Leaks (Fugitive Emission Sources))

Revise (c)(1) and (2) as shown below:

- (1) Each sampling connection system shall be equipped with a closed-purge system, **closed-loop system** or closed vent system **unless an alternate means of emission limitation is requested under 40 CFR 61.242-1(c)**.
- (2) Each closed-purge system, **closed-loop system** or closed-vent system as required in paragraph (c)(1) shall ~~return the purged process fluid to the process line with zero VHAP emissions to atmosphere~~ **comply with one of the following requirements:**
  - (A) **Return the purged process fluid directly to the process line; or**
  - (B) **Collect and recycle the purged process fluid; or**
  - (C) **Be designed and operated to capture and transport all the purged process fluid to a control device that complies with 40 CFR 61.242-11; or**
  - (D) **Collect, store and transport the following purged process fluid to any of the systems or facilities listed in 40 CFR 61.242-5(b)(4)(i) through (iii).**

Add (d)(5) as follows:

- (5) Open-ended valves or lines in an emergency shutdown system which are designed to open automatically in the event of a process upset are exempt from the requirements of paragraphs (d)(1), (d)(2) and (d)(3).

Delete paragraph (e).

At the end of (f)(1), add “or to an exit concentration of 20 parts per million by volume, whichever is less stringent.”

## Response #22

Since an alternative means of emission limitation has not been requested or approved, IDEM does not agree to include the phrase “unless an alternate means of emission limitation is requested under 40 CFR 61.242-1(c).” If ESSROC submits such a request and receives approval, a permit modification can be issued to make the necessary change to the permit.

IDEM agrees to make the other changes as suggested.

### D.6.4 National Emission Standard for Equipment Leaks (Fugitive Emission Sources)[326 IAC 14-8-1][40 CFR 61, Subpart V] [40 CFR 63, Subpart DD]

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- (c) Pursuant to 40 CFR 61.242-5 (Standards: Sampling connecting systems), the standards listed below apply to sampling connecting systems:
  - (1) Each sampling connection system shall be equipped with a closed-purge system, **closed-loop system**, or closed vent system.
  - (2) Each closed-purge system, **closed-loop system**, or closed-vent system as required in paragraph (c)(1) shall ~~return the purged process fluid to the process line with zero VHAP emissions to atmosphere~~ **comply with one of the following requirements:**
    - (A) **Return the purged process fluid directly to the process line; or**
    - (B) **Collect and recycle the purged process fluid; or**
    - (C) **Be designed and operated to capture and transport all the purged process fluid to a control device that complies with 40 CFR 61.242-11; or**
    - (D) **Collect, store and transport the following purged process fluid to any of the systems or facilities listed in 40 CFR 61.242-5(b)(4)(i) through (iii).**

## Comment #23

### D.6.5 (Monitoring Procedures for Equipment Leaks)

At the end of (a)(1), add “except as specified in paragraphs (a)(1)(A) or (a)(1)(B) or this condition, or unless an alternate means of emission limitation is requested under 40 CFR 61.242-1(c).”

Add (a)(1)(A) and (B) as follows:

- (A) Each pump equipped with a dual mechanical seal system that includes a barrier fluid

system is exempt from Condition D.6.5 provided that the requirements of 40 CFR 61.242-2(d)(1) through (d)(6) are met, as applicable.

- (B) Each pump that is designated, as described in 40 CFR 61.246(e)(2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from Condition D.6.5 provided that the requirements of 40 CFR 61.242-2(e)(1) through (e)(3) are met, as applicable.

Change (e)(3) to say "a control device complying with 40 CFR 61.242-11" instead of "the activated carbon canister system".

In (g)(1) the rule cite should be 61.245(b), instead of 61.05.

Change (g)(2) as follows:

Leaks, as indicated by an instrument reading greater than 500 ppmv **above background or and** visual inspections, shall be repaired as soon as practicable, but not later than 15 calendar days after the leak is detected **except as provided in (g)(3)(A) of this condition.**

### Response #23

Since an alternative means of emission limitation has not been requested or approved, IDEM does not agree to include the phrase "unless an alternate means of emission limitation is requested under 40 CFR 61.242-1(c)." If ESSROC submits such a request and receives approval, a permit modification can be issued to make the necessary change to the permit.

IDEM agrees to make the other changes as requested.

#### D.6.5 Monitoring Procedures for Equipment Leaks [326 IAC 2-7-6(1)] [40 CFR 61, Subpart V] [40 CFR 63, Subpart DD]

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Pursuant to 40 CFR 61, Subpart V, the Permittee must conduct monitoring in accordance with the paragraphs listed below to comply with leak detection requirements:

- (a) Pursuant to 40 CFR 61.242-2, the following standards apply to pumps:
- (1) Each pump shall be monitored monthly to detect leaks by the methods specified in 40 CFR 61.245(b), **except as specified in paragraphs (a)(1)(A) or (a)(1)(B) of this condition.**
- (A) **Each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from Condition D.6.5 provided that the requirements of 40 CFR 61.242-2(d)(1) through (d)(6) are met, as applicable.**
- (B) **Each pump that is designated, as described in 40 CFR 61.246(e)(2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from Condition D.6.5 provided that the requirements of 40 CFR 61.242-2(e)(1) through (e)(3) are met, as applicable.**



- (e) Pursuant to 40 CFR 61.242-10 (Standards: Delay of Repair), the standards listed below apply to delay of repair of equipment:
  - (3) Delay of repair for valves will be allowed if:
    - (A) The Permittee demonstrates that emissions of purged material resulting from immediate repair are greater than the fugitive emissions likely to result from delay of repair; and,
    - (B) When repair procedures are effected, the purged material is collected and destroyed or recovered in the ~~activated carbon canister system~~ **a control device complying with 40 CFR 61.242-11.**
- (g) Pursuant to 40 CFR 61.242-11(f), the monitoring requirements listed below apply to the closed-vent system.
  - (1) Closed-vent systems shall be monitored to determine compliance with 40 CFR 61.242-11 initially in accordance with 40 CFR ~~61.05~~ **61.245(b)**, annually, and at other times requested by the US EPA or IDEM, OAQ.
  - (2) Leaks, as indicated by an instrument reading greater than 500 ppmv **above background or and** visual inspections, shall be repaired as soon as practicable, but not later than 15 calendar days after the leak is detected **except as provided in (g)(3)(A) of this condition.**
  - (3) A first attempt at repair shall be made no later than 5 calendar days after the leak is detected.

#### Comment #24

Condition D.6.6 (National Emission Standard for Benzene Waste Operations)

Add the following to the first paragraph:

**Pursuant to 40 CFR 61, Subpart FF (National Emissions Standard for Benzene Waste Operations (40 CFR 61.342), the Permittee shall be exempt from the requirements of 40 CFR 61.342(b) and (c) and Condition D.6.6 of the permit, if the total annual benzene quantity from the facility waste is less than 10 megagrams per year (Mg/yr). Otherwise.....**

In paragraph (a) and (b)(3)(B) change “an activated carbon canister system” to “a control device”.

In (a)(1), (a)(3), (b)(1)(A), (b)(3)(A), and (b)(4)(B) add “as indicated by an instrument reading of less than 500 ppmv above background” after “no detectable emissions”.

Add (a)(5) as follows:

For tanks that comply with 40 CFR 61.343(b), a closed vent system and control device are not required.

In (b)(4) change “tank” to “container”.

## Response #24

ESSROC is not exempt from the requirements of 40 CFR 61, Subpart FF; therefore, IDEM does not believe it is necessary to add a paragraph stating the exemption criteria of the rule. If ESSROC makes changes at the facility such that this rule is no longer applicable, a permit modification can be issued to revise this condition at that time.

ESSROC's tanks do not comply with the requirements of 40 CFR 61.343(b); therefore, it is not necessary to state in the permit that tanks that comply with these requirements are exempt from the requirement to have a closed vent system and control device.

IDEM agrees to make the other requested changes.

D.6.6 National Emission Standard for Benzene Waste Operations [40 CFR Part 61, Subpart FF]  
Pursuant to 40 CFR 61.342(b), the Permittee shall manage each waste stream that contains benzene meeting the criteria specified in 40 CFR 61.340(b) in accordance with 40 CFR 61, Subpart FF - National Emissions Standard for Benzene Waste Operations, paragraphs 61.342(c) through (h).

- (a) Pursuant to 40 CFR 61.342(c)(1)(ii), the Permittee shall control air emissions from each tank in accordance with the applicable standards specified in 40 CFR 61.343(a). Pursuant to 40 CFR 61.343(a)(1), each tank shall be covered by a fixed roof and vented through a closed-vent system that routes all organic vapors vented from the tank to an activated carbon canister system in accordance with items (1) through (4) below.
  - (1) The cover and all openings shall be designed to operate with no detectable emissions, **as indicated by an instrument reading of less than 500 ppmv above background**, in accordance with 40 CFR 61.355(h) and condition D.6.12(c).
  - (2) Each opening shall be maintained in a closed, sealed position at all times that waste is in the tank except when it is necessary to use the opening for waste sampling or removal, or for equipment inspection, maintenance, or repair.
  - (3) Condition D.6.6(a)(2) does not apply if the cover and closed-vent system operate such that the tank is maintained at a pressure less than atmospheric pressure and the opening meets the following conditions:
    - (A) The purpose of the opening is to provide dilution air to reduce the explosion hazard,
    - (B) The opening is designed to operate with no detectable emissions, **as indicated by an instrument reading of less than 500 ppmv above background**, in accordance with 40 CFR 61.355(h) and condition D.6.12(c), and
    - (C) The pressure is monitored continuously to ensure that the pressure in the tank remains below atmospheric pressure.
  - (4) The closed-vent system and activated carbon canister system shall be designed to

operate in accordance with 40 CFR 61.349 and condition D.6.7.

- (b) Pursuant to 40 CFR 61.342(c)(1)(ii), the Permittee shall control air emissions from each container in accordance with the applicable standards specified in 40 CFR 61.345.
  - (1) The Permittee shall install, operate, and maintain a cover on each container used to handle, transfer, or store waste in accordance with the following requirements:
    - (A) The cover and all openings shall be designed to operate with no detectable emissions, **as indicated by an instrument reading of less than 500 ppmv above background**, in accordance with 40 CFR 61.355(h) and condition D.6.12(c).
    - (B) Each opening shall be maintained in a closed, sealed position when waste is in the container, except when it is necessary to use the opening for waste loading, removal, inspection, or sampling, except as provided in D.6.6(b)(4).
  - (2) When transferring waste into a container by pumping, the Permittee shall perform the transfer using a submerged fill pipe as specified in 40 CFR 61.345(a)(2).
  - (3) Treatment of waste in a container as specified in 40 CFR 61.345(a)(3) shall route all organic vapors vented from the container through a closed-vent system to the activated carbon canister system.
    - (A) The cover and all openings shall be designed to operated with no detectable emissions, **as indicated by an instrument reading of less than 500 ppmv above background**, in accordance with 40 CFR 61.355(h) and condition D.6.12(c).
    - (B) The closed-vent system and activated carbon canister system shall be designed to operate in accordance with 40 CFR 61.349 and condition D.6.7.
  - (4) Condition D.6.8(b)(1)(B) and D.6.8(b)(2) do not apply if the cover and closed-vent system operate such that the ~~tank~~ **container** is maintained at a pressure less than atmospheric pressure and the opening meets the following conditions:
    - (A) The purpose of the opening is to provide dilution air to reduce the explosion hazard,
    - (B) The opening is designed to operate with no detectable emissions, **as indicated by an instrument reading of less than 500 ppmv above background**, in accordance with 40 CFR 61.355(h) and condition D.6.12(c), and
    - (C) The pressure is monitored continuously to ensure that the pressure in the tank remains below atmospheric pressure.

### Comment #25

Change the title of Condition D.6.7 to (Standards: Closed-Vent Systems and Control Device)

In (b)(1)(A) add "as indicated by an instrument reading of less than 500 ppmv above background" after "no detectable emissions".

Add (c) as follows:

Pursuant to 40 CFR 61.349(a)(2), a control device shall be designed and operated in accordance with 40 CFR 61.349(a)(2)(i) through (a)(2)(iv), as applicable.

### Response #25

IDEM agrees to make the suggested changes.

**D.6.7 Standards: Closed-Vent Systems and Activated Carbon Canister System [40 CFR Part 61, Subpart FF] [40 CFR 61.349]**

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The provisions of 40 CFR 61.349 apply to the closed-vent system and the activated carbon canister system used to control air emissions from the tanks and containers with conditions for which 40 CFR 61.343(a) and 61.345(a)(3) applies. The Permittee shall meet the requirements specified in items (a) and (b) below:

- (a) Pursuant to 40 CFR 61.349(a), the Permittee shall meet the following requirements for the closed-vent system and activated carbon canister system used to comply with 40 CFR 61.343 and 61.345:
  - (1) The Permittee shall properly design, install, operate, and maintain the closed-vent system in accordance with the following requirements:
    - (A) The closed-vent system shall be designed to operate with no detectable emissions **as indicated by an instrument reading of less than 500 ppmv above background** in accordance with 40 CFR 61.355(h) and condition D.6.12(c).
    - (B) Vent systems that contain a bypass line shall install, maintain, and operate according to manufacturer's specifications a flow indicator as specified in 61.349(a)(1)(ii).
    - (C) All gauging and sampling devices shall be gas-tight except when gauging or sampling is taking place.
    - (D) Devices use by the closed-vent system that vent directly to the atmosphere shall remain in a closed, sealed position during normal operations except when the device needs to open to prevent physical damage or permanent deformation of the closed-vent system resulting from malfunction of the unit in accordance with good engineering and safety practices for handling flammable, explosive, or other hazardous materials.

- (2) Pursuant to 40 CFR 61.349(a)(2)(ii), the Permittee shall maintain an activated carbon canister system designed and operated to control the organic emissions vented to it with an efficiency of 95 weight percent or greater.
- (b) Pursuant to 40 CFR 61.349(b), the closed-vent system and activated carbon canister shall be operated at all times when waste is placed in the waste management unit vented to the control device except when maintenance or repair of the waste management unit cannot be completed without a shutdown of the control device.
- (c) **Pursuant to 40 CFR 61.349(a)(2), a control device shall be designed and operated in accordance with 40 CFR 61.349(a)(2)(i) through (a)(2)(iv), as applicable.**

#### Comment #26

Condition D.6.10 (Monitoring Procedures for Activated Carbon Canister System and Closed-Vent System)

ESSROC does not have a bypass line at this time. Therefore, at the beginning of paragraph (b), please include "If applicable".

#### Response #26

IDEM agrees to change paragraph (b) of the condition to say that it applies if a bypass line is installed.

- (b) **If a bypass line is installed, the** ~~The~~ Permittee shall visually inspect the bypass line valve at least once every month to ensure that the valve is maintained in the closed position and readings from the flow monitoring device at least once each operating day as specified in 40 CFR 61.354(f) and condition D.6.7.

On August 6, 2003, EPA Region V submitted comments on the proposed permit. A summary of the comments is as follows:

#### Comment #1

USEPA suggests the following changes to Condition D.3.7 (PSD Applicability for Kilns)

D.3.7 PSD Applicability for kilns [326 IAC 2-2-3] [326 IAC 2-7-6(3)] [326 IAC 2-7-15]

~~The EPA has information that indicates~~ **alleged an enforcement action** that the kilns are subject to the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration). Therefore, the Permit Shield provided by Condition B.13 of this permit does not apply to the kilns with regards to 326 IAC 2-2 (PSD). **If the enforcement action results in a settlement or determination that the kilns are subject to 326 IAC 2-2,** ~~The~~ **the** OAQ will promptly reopen this permit using the provisions of 326 IAC 2-7-9 (Permit Reopening) to include detailed requirements necessary to comply with 326 IAC 2-2 (PSD) and a schedule for achieving compliance with such requirements.

#### Response #1

IDEM agrees to make the changes as suggested.

Upon further review, IDEM has decided to make the following revisions to the permit.

### Revision #1

The notification requirement listed in C.18(b)(3) has been modified to apply on to situations where the emission unit will continue to operate for an extended period of time while the compliance monitoring parameter is out of range. This part of the condition is intended to provide IDEM an opportunity to assess the situation and determine whether any additional actions are necessary to demonstrate compliance with applicable requirements.

#### C.18 Compliance Response Plan - Preparation, Implementation, Records, and Reports [326 IAC 2-7-5] [326 IAC 2-7-6]

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- (b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition as follows:
  - (1) Reasonable response steps shall be taken as set forth in the Permittee's current Compliance Response Plan or OMM Plan; or
  - (2) If none of the reasonable response steps listed in the Compliance Response Plan or OMM Plan is applicable or responsive to the excursion, the Permittee shall devise and implement additional response steps as expeditiously as practical. Taking such additional response steps shall not be considered a deviation from this permit so long as the Permittee documents such response steps in accordance with this condition.
  - (3) If the Permittee determines that additional response steps would necessitate that the emissions unit or control device be shut down, **and it will be 10 days or more until the unit or device will be shut down, then the Permittee shall promptly notify** the IDEM, OAQ ~~shall be promptly notified~~ of the expected date of the shut down, the status of the applicable compliance monitoring parameter with respect to normal, and the results of the actions taken up to the time of notification.

### Revision #2

Statements in the permit that indicate that failure to take response steps will be considered a violation of the permit have been changed to indicate that failure to take response steps will be considered a deviation from this permit. IDEM acknowledges that not all deviations are violations. A deviation only becomes a violation if enforcement action is taken in response to the deviation. One example of the revision is shown below.

#### D.1.7 Visible Emissions Notations

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- (a) Visible emission notations of each of the baghouse stack exhausts shall be performed once per ~~shift~~ **day** during normal daylight operations. A trained employee shall record whether visible emissions are present.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not

counting startup or shut down time.

- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of visible emissions for that specific process.
- (e) If visible emissions are present at any baghouse stack, the Permittee shall implement appropriate procedures as set out in its Compliance Response Plan for such facility. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a ~~violation of~~ **deviation from** this permit.

### Revision #3

The decision as to whether the Permittee can skip one test cycle, will be made after the initial tests are completed, based on a number of relevant factors. Therefore, the language indicating that one test cycle can be skipped, has been removed from the permit.

#### D.3.9 Testing Requirements [40 CFR 63, Subpart EEE] [326 IAC 2-7-6(1),(6)] [326 IAC 2-1-3(i)(8)] [326 IAC 2-1.1-11]

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- (a) No later than six months after September 30, 2002, which is the compliance date for the National Emission Standards for Hazardous Air Pollutants (NESHAP) for the Hazardous Waste Combustors, the Permittee shall demonstrate initial compliance with the emission limits established in Condition D.3.3 by commencing initial comprehensive performance tests in accordance with 40 CFR 63.1207 and Section C - Performance Testing. These tests shall also establish limits for the operating parameters provided by 40 CFR 63.1209, and demonstrate compliance with the performance specifications for continuous monitoring systems. The testing must be completed within 60 days after the date of commencement. These tests shall be repeated at least once every 2.5 years from the date of this valid compliance demonstration. ~~Based on the results of the previous stack test and compliance monitoring, IDEM may, at its discretion, allow the Permittee to skip one test cycle for one or both of the kilns and clinker coolers.~~

### Revision #4

In order to be consistent with the monitoring requirements, the following change has been made to Condition D.3.16

#### D.3.16 Record Keeping Requirements

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- (c) To document compliance with Conditions D.3.9, D.3.12, D.3.14, and D.3.15, the Permittee shall maintain records in accordance with (1) through (6) below. Records shall be complete and sufficient to establish compliance with the limits established in Conditions D.3.3 and D.3.4.
  - (2) Data and results from the most recent stack test.

- (3) All continuous emissions monitoring data.
- (4) All ESP ~~voltage and current~~ **parametric** monitoring readings.
- (5) All visible emission readings and Method 9 opacity readings whenever required by D.3. ~~16~~ **15**.
- (6) All preventive maintenance measures taken.
- (7) All response steps taken and the outcome for each.



## Indiana Department of Environmental Management Office of Air Quality

### Technical Support Document (TSD) for a Part 70 Operating Permit

#### Source Background and Description

**Source Name:** ESSROC Cement Corporation  
**Source Location:** State Road 25 South, 3084 West County Road 225 South,  
 Logansport, Indiana 46947  
**County:** Cass  
**SIC Code:** 3241  
**Operation Permit No.:** T017-6033-00005  
**Permit Reviewer:** Nisha Sizemore

The Office of Air Quality (OAQ) has reviewed a Part 70 permit application from ESSROC Cement Corporation relating to the operation of a Portland cement manufacturing operation. This Part 70 permit contains provisions intended to satisfy the requirements of the construction permit rules.

#### Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

##### Quarry Activities

- (1) Drilling and blasting, identified as EU101 and EU102 respectively, commenced operation in 1961, with associated fugitive particulate matter (PM) emissions.

##### Raw Material / Clinker Stockpile Operations

- (2) One (1) limestone stockpile, identified as EU103, created in 1961.
- (3) Two (2) reclaimed clay stockpiles, identified as EU104 and EU105, created in 1961.
- (4) Two (2) wet flyash stockpiles, identified as EU106 and EU107, created in 1967.
- (5) Carhoe Missouri clay unloading, identified as EU108, created in 1962.
- (6) Truck to quarry loading, identified as EU109, commenced operation in 1961.
- (7) One (1) Mo. clay stockpile, identified as EU110, created in 1962.
- (8) One (1) alternate materials stockpile, identified as EU111, created in 1967.
- (9) One (1) overburden clay stockpile, identified as EU128, created in 1962.
- (10) One (1) iron stockpile, identified as EU301, created in 1967.
- (11) Iron unloading, identified as EU302, commenced operation in 1967.

- (12) One (1) gypsum stockpile, identified as EU303, created in 1962.
- (13) Gypsum unloading, identified as EU304, created in 1962.
- (14) One (1) coal/coke stockpile, identified as EU305, created in 1962.
- (15) Coal/coke unloading, identified as EU306, commenced operation in 1962.
- (16) One (1) coal/coke crane storage stockpile, located outside, identified as EU312, created in 1962.
- (17) Coal/coke unloading, identified as EU313, commenced operation in 1962.
- (18) West clinker storage stockpile, identified as EU512, created in 1962.
- (19) Special clinker stockpile, identified as EU513, created in 1962.
- (20) Clinker loading, identified as EU514, commenced operation in 1962.
- (21) Special clinker stockpile (crushed), identified as EU515, created in 1962.

#### **Raw Material Sizing Operations**

- (22) Raw material loading, identified as EU112, commenced operation in 1962.
- (23) Quarry haul road, identified as EU113, created in 1961.
- (24) Raw material unloading, identified as EU114, commenced operation in 1962.
- (25) One (1) apron feeder transfer to primary crusher, identified as EU115, constructed in 1961, with a nominal capacity of 550 tons per hour.
- (26) One (1) primary crusher, identified as EU116, constructed in 1961, with a nominal capacity of 550 tons per hour, with PM emissions controlled by one (1) baghouse, identified as baghouse CE101, and exhausting to one (1) stack, identified as EP101.
- (27) One (1) clean-up screw, identified as EU117, constructed in 1961, with a nominal capacity of 15 tons per hour.
- (28) One (1) impact apron feeder, identified as EU118, constructed in 1961, with a nominal capacity of 550 tons per hour, with emissions controlled by a baghouse, identified as baghouse CE101, and exhausting to one (1) stack, identified as EP101.
- (29) Belt 1 covered conveyor, identified as EU119, constructed in 1962, with a nominal capacity of 550 tons per hour, with emissions controlled by two baghouses, identified as baghouse CE101 and baghouse CE102, and exhausting to two (2) stacks, identified as EP101 and EP102.

- (30) Screen transfers, identified as EU120, constructed in 1962, with a nominal capacity of 550 tons per hour.
- (31) Belt 2 covered conveyor, identified as EU121, constructed in 1962, with a nominal capacity of 300 tons per hour.
- (32) One (1) secondary crusher, identified as EU122, constructed in 1969, with a nominal capacity of 300 tons per hour, with PM emissions controlled by one (1) baghouse, identified as baghouse CE102, and exhausting to one (1) stack, identified as EP102
- (33) Belt 3 covered conveyor, identified as EU201, constructed in 1962, with a nominal capacity of 550 tons per hour.

#### **Kiln #1 and kiln #2 Recycled CKD Operations**

- (34) #1 recycled dust elevator, identified as EU408, constructed in 1965, with emissions controlled by a baghouse, identified as baghouse 106 and CE402, and exhausting to one (1) stack identified as EP402.
- (35) One (1) recycled dust holding tank, identified as EU409, and constructed in 1965.
- (36) One (1) feeder screw and F-K pump, identified as EU410, constructed in 1965, with emissions controlled by a baghouse, identified as baghouse 106 and CE402, and exhausting to one (1) stack identified as EP402.
- (37) #1 recycled dust scoop system/insufflation system, identified as EU411, constructed in 1995, with emissions controlled by a baghouse, identified as baghouse 136 and CE403, and exhausting to one (1) stack identified as EP403. The #1 recycled dust scoop was constructed in 1995. The insufflation system was constructed in 1965.

#### **Kiln #1 and kiln #2 Waste CKD Operations**

- (38) five (5) discharge hopper screws, identified as EU402, constructed in 1965.
- (39) one (1) covered 16" cross screw, identified as EU403, constructed in 1965.
- (40) One (1) #1 waste dust elevator, identified as EU404, constructed in 1965.
- (41) One (1) 9" cross screw, identified as EU405, constructed in 1965.

#### **Kiln #2 Recycled CKD Operations**

- (42) #2 recycled dust elevator, identified as EU417, constructed in 1965, with emissions controlled by a baghouse, identified as baghouse 106 and CE402, and exhausting to one (1) stack identified as EP402.

- (43) One (1) recycled dust holding tank, identified as EU418, constructed in 1965.
- (44) One (1) feeder screw and F-K pump, identified as EU419, constructed in 1965, with emissions controlled by a baghouse, identified as baghouse 106 and CE402, and exhausting to one (1) stack identified as EP402.
- (45) #2 recycled dust scoop system/insufflation system, identified as EU420, constructed in March 1995, with emissions controlled by a baghouse, identified as baghouse 137 and CE406, and exhausting to one (1) stack identified as EP405. The #2 recycled dust scoop system was constructed in 1995. The insufflation system was constructed in 1965.

#### **Kiln #2 Waste CKD Operations**

- (46) five (5) discharge hopper screws, identified as EU414, constructed in 1965.
- (47) 16" covered cross screws, identified as EU415, constructed in 1965.
- (48) #2 waste dust elevator, identified as EU416, constructed in 1965.

#### **Waste CKD Disposal Operations**

- (49) One (1) waste dust tank, identified as EU406, constructed in 1962.
- (50) Truck unloading, identified as EU407, commenced operation in 1962.
- (51) One (1) cement kiln dust haul road system, identified as EU422, constructed in 1962.
- (52) One (1) cement kiln dust pile, identified as EU423, commenced operation in 1962.

#### **Clay Processing Operations**

- (53) Clay unloading to hopper, identified as EU123, commenced operation in 1962, with a nominal capacity of 30 tons per hour.
- (54) One (1) wobbler feeder for transferring clay to the log washer system, identified as EU124, constructed in 1962, with a nominal capacity of 30 tons per hour.
- (55) One (1) log washer system, identified as EU125, constructed in 1962, with a nominal capacity of 30 tons per hour.
- (56) One (1) waste gravel pile, identified as EU126, created in 1962.
- (57) Loading waste gravel into trucks, identified as EU127, commenced operation in 1962.

#### **Crane Storage Facilities**

- (58) Three (3) limestone storage bins, identified as EU202, constructed in 1962.
- (59) One (1) Missouri clay storage bin, identified as EU203, constructed in 1962.
- (60) One (1) iron storage bin, identified as EU204, constructed in 1962.
- (61) West flyash truck unloading utilizing pneumatic conveying, identified as EU210, including tank 9, commenced operation in 1962, with a nominal capacity of 100 tons, tank 10 with a nominal capacity of 100 tons, tank 11 with a nominal capacity of 125 tons, and tank 12 with a nominal capacity of 125 tons, with emissions controlled by a baghouse, identified as baghouse 138 and CE202, and exhausting to one (1) stack identified as EP202.
- (62) One (1) inside west flyash holding tank, identified as EU211, with a nominal storage capacity of 130 tons, constructed in 1962, with emissions controlled by a baghouse, identified as baghouse 104 and CE203, and exhausting to one (1) stack identified as EP203.
- (63) East flyash truck unloading utilizing pneumatic conveying, identified as EU213, commenced operation in 1962, with emissions controlled by a baghouse, identified as baghouse 103 and CE204, and exhausting to one (1) stack identified as EP204.
- (64) One (1) east flyash storage bin, identified as EU214, constructed in 1962.
- (65) One (1) spare storage bin, identified as EU314, constructed in 1962.
- (66) One (1) coal/coke storage bin, identified as EU315, constructed in 1962.
- (67) Two (2) gypsum storage bins, identified as EU316, constructed in 1962.
- (68) Clinker bin 1 finish mill #1, identified as EU505, constructed in 1962.
- (69) Stone/clinker bin 2 finish mill #1, identified as EU506, constructed in 1962.
- (70) Clinker bin 3 finish mill #1, identified as EU507, constructed in 1962.
- (71) Crane unloading, identified as EU510, commenced operation in 1962.
- (72) Clinker bin 1 #2 finish mill, identified as EU520, constructed in 1962.
- (73) Clinker bin 2 #2 finish mill, identified as EU521, constructed in 1962.
- (74) Bin 1 clinker spill pile, identified as EU522, constructed in 1962.

#### **Raw Mill Facilities**

- (75) Three belt feeders, identified as EU205, constructed in 1962, with a nominal capacity of 45 tons per hour.
- (76) One (1) Missouri clay belt feeder, identified as EU206, constructed in 1962, with a

nominal capacity of 45 tons per hour.

- (77) One (1) iron feeder, identified as EU207, constructed in 1962, with a nominal capacity of 45 tons per hour.
- (78) One (1) covered cross belt, identified as EU208, constructed in 1962, with a nominal capacity of 45 tons per hour.
- (79) One (1) covered raw mill feed belt, identified as EU209, constructed in 1962, with a nominal capacity of 175 tons per hour, with emissions controlled by a baghouse, identified as baghouse 105 and CE201, and exhausting to one (1) stack identified as EP201.
- (80) Transfer screw to raw mill, identified as EU212, constructed in 1962, with a nominal capacity of 15 tons per hour.
- (81) One (1) east short covered screw, identified as EU215, constructed in 1962, with a nominal capacity of 15 tons per hour.
- (82) One (1) E-W long covered screw, identified as EU216, constructed in 1962, with a nominal capacity of 15 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as baghouse 105 and CE405, and exhausting to one (1) stack, identified as EP405.

#### **Unloading Station Facilities**

- (83) Railroad unloading, identified as EU307, commenced operation in 1962.
- (84) One (1) unloading station hopper, identified as EU308, constructed in 1962.
- (85) One (1) belt feeder, identified as EU309, constructed in 1962.
- (86) Belt 7 covered conveyor, identified as EU310, constructed in 1962.
- (87) Conveyor transfer to outside storage, identified as EU311, constructed in 1962.

#### **Fossil Fuel Facilities**

- (88) One (1) spare belt feeder to belt 8, identified as EU317, constructed in 1962.
- (89) One (1) coal/coke belt feeder to belt 8, identified as EU318, constructed in 1962.
- (90) Belt 8 to coal/coke tanks, identified as EU319, constructed in 1962.
- (91) One (1) coal/coke tank #1, identified as EU320, constructed in 1962.
- (92) Belt feed to coal mill #1, identified as EU321, constructed in 1962.
- (93) Coal/Coke cross belt, identified as EU322, constructed in 1962.

(94) One (1) coal/coke tank #2, identified as EU323, constructed in 1962.

(95) Belt feed to coal mill #2, identified as EU324, constructed in 1962.

#### **Kiln #1 and kiln #2 Clinker Handling Facilities**

(96) One (1) #1 clinker drag conveyor, identified as EU501, constructed in 1962, with emissions controlled by a baghouse, identified as baghouse 109 and CE501, and exhausting to one (1) stack identified as EP501.

(97) #1 CCDC screws, identified as EU502, constructed in 1962.

(98) #1 clinker elevator, identified as EU503, constructed in 1962, with emissions controlled by a baghouse, identified as baghouse 109 and CE501, and exhausting to one (1) stack identified as EP501.

(99) Clinker conveyor transfer system, identified as EU504, constructed in 1962 and modified in 1975, with emissions controlled by a baghouse, identified as baghouse 110 and CE502, and exhausting to one (1) stack identified as EP502.

#### **Kiln #2 Clinker Handling Facilities**

(100) #2 clinker drag conveyor, identified as EU516, constructed in 1964, with emissions controlled by two (2) baghouses, identified as baghouse 112 and CE503 and baghouse 113 and CE504, and exhausting to two (2) stacks identified as EP503 and EP504 respectively.

(101) #2 CCDC screw conveyor, identified as EU517 constructed in 1964.

(102) #2 clinker elevator, identified as EU518, constructed in 1964, with emissions controlled by two baghouses, identified as baghouse 112 and CE503 and as baghouse 113 and CE504, and exhausting to two (2) stacks identified as EP503 and EP504 respectively.

(103) Clinker conveyor transfer system circuit, identified as EU519, constructed in 1964, with emissions controlled by a baghouse, identified as baghouse 113 and CE504, and exhausting to one (1) stack identified as EP504.

#### **Finish Mill #1 Facilities**

(104) Clinker bin #1 feeder, identified as EU508, constructed in 1962.

(105) Stone/clinker bin 2 feeder, identified as EU509, constructed in 1962.

(106) One (1) gypsum feed belt, identified as EU511, constructed in 1962.

(107) One (1) finish mill #1 feed belt, identified as EU601, constructed in 1962, with a nominal capacity of 45.0 tons per hour, with PM emissions controlled by one (1) baghouse, identified as baghouse 114 and CE601, and exhausting to one (1)

stack, identified as EP601.

- (108) one (1) finish mill #1 circuit, identified as EU602, constructed in 1962, with emissions controlled by a baghouse, identified as baghouse 116 and CE602, and exhausting to one (1) stack identified as EP602.
- (109) One (1) separator, cooler #1 and transfer, identified as EU603, constructed in 1962, with emissions controlled by a baghouse, identified as baghouse 115 and CE603, and exhausting to one (1) stack identified as EP603.

### **Finish Mill #2 Facilities**

- (110) Clinker bin 1 feeder, identified as EU523, constructed in 1964.
- (111) Clinker bin 2 feeder, identified as EU524, constructed in 1964.
- (112) FM #2 gypsum feeder, identified as EU525, constructed in 1964.
- (113) One (1) finish mill #2 feed belt, identified as EU604, constructed in 1964, with a nominal capacity of 45.0 tons per hour, with PM emissions controlled by two (2) baghouses, identified as baghouses 117a (CE604a) and 117b (CE604b) respectively, and exhausting to one (1) stack, identified as EP604.
- (114) One (1) finish mill #2 circuit, identified as EU605, constructed in 1964, with emissions controlled by a baghouse, identified as baghouse 119 and CE605, and exhausting to one (1) stack identified as EP605.
- (115) One (1) separator, cooler #2 and transfer, identified as EU606, constructed in 1964, with emissions controlled by a baghouse, identified as baghouse 118 and CE606, and exhausting to one (1) stack identified as EP606.

### **Finish Product Silo Storage Facilities**

- (116) Silos 11/13, identified as EU703, constructed in 1965, with emissions controlled by a baghouse, identified as baghouse 125 and CE703, and exhausting to one (1) stack identified as EP703.
- (117) Silos 12/14/17, identified as EU704, constructed in 1965, with emissions controlled by a baghouse, identified as baghouse 126 and CE704, and exhausting to one (1) stack identified as EP704.
- (118) Silos 15/16/18, identified as EU705, constructed in 1965, with emissions controlled by a baghouse, identified as baghouse 135 and CE705, and exhausting to one (1) stack identified as EP705.
- (119) Silos 1/3, identified as EU707, constructed in 1961, with emissions controlled by a baghouse, identified as baghouse 120 and CE707, and exhausting to one (1) stack identified as EP707.



- (120) Silos 2/4, identified as EU708, constructed in 1961, with emissions controlled by a baghouse, identified as baghouse 121 and CE708, and exhausting to one (1) stack identified as EP708.
- (121) Silos 5/7, identified as EU709, constructed in 1961, with emissions controlled by a baghouse, identified as baghouse 122 and CE709, and exhausting to one (1) stack identified as EP709.
- (122) Silos 6/8, identified as EU710, constructed in 1961, with emissions controlled by a baghouse, identified as baghouse 123 and CE710, and exhausting to one (1) stack identified as EP710.
- (123) Silos 9/10, identified as EU711, constructed in 1961, with emissions controlled by a baghouse, identified as baghouse 124 and CE711, and exhausting to one (1) stack identified as EP711.

#### **Finish Product Silo Transfer Operations**

- (124) Truck/Railroad car unloading and internal transfers to silos, identified as EU701 and EU702, commenced operation in 1962, with emissions controlled by two (2) baghouses, identified as baghouse 132 and CE701 and as baghouse 133 and CE702, and exhausting to two (2) stacks identified as EP701 and EP702 respectively.

#### **Finish Product Loadout Old Silos (West) Operation**

- (125) Bulk truck loadout, identified as EU712, constructed in 1962, with emissions controlled by a baghouse, identified as baghouse 129 and CE712, and exhausting to one (1) stack identified as EP712.
- (126) Bulk railroad loadout, identified as EU713, constructed in 1962, with emissions controlled by a baghouse, identified as baghouse 130 and CE713, and exhausting to one (1) stack identified as EP713.

#### **Finish Product Loadout New Silos (East) Operation**

- (127) Bulk truck loadout, identified as EU706, constructed in 1965, with emissions controlled by a baghouse, identified as baghouse 131 and CE706, and exhausting to one (1) stack identified as EP706.

#### **Finish Product Masonry Packing**

- (128) Transfer to masonry packer, identified as EU801, constructed in 1965, with emissions controlled by two (2) baghouses, identified as baghouse 128 and CE801 and as baghouse 139 and CE802, and exhausting to two (2) stacks identified as EP801 and EP802 respectively.
- (129) One (1) masonry packer, identified as EU802, constructed in 1965, with emissions controlled by a baghouse, identified as baghouse 128 and CE801, and exhausting to one (1) stack identified as EP801.

- (130) Transfer to pallets/storage (masonry), identified as EU803, constructed in 1965.

#### **Finish Product Portland Packing**

- (131) Transfer to portland packer, identified as EU804, constructed in 1962, with emissions controlled by a baghouse, identified as baghouse 127 and CE803, and exhausting to one (1) stack identified as EP803.
- (132) One (1) portland packer, identified as EU805, constructed in 1962, with emissions controlled by a baghouse, identified as baghouse 127 and CE803, and exhausting to one (1) stack identified as EP803.
- (133) Transfer to pallets/storage (portland), identified as EU806, constructed in 1962.

#### **Kiln #1 and Kiln #2 Facilities**

- (134) One (1) wet process rotary cement kiln #1, identified as EU401, constructed in 1962, with a heat input capacity of 245 million Btu per hour, with a nominal production rate of 42.0 tons per hour (as clinker), with PM emissions controlled by one (1) electrostatic precipitator (ESP #1), identified as CE401, and exhausting to one (1) stack, identified as EP401. Raw material sources include clay, sand, limestone, and other sources of silica, alumina, iron, calcium, magnesium, and trace elements.
- (135) One (1) wet process rotary cement kiln #2, identified as EU413, constructed in 1964, with a heat input capacity of 245 million Btu per hour, with a nominal production rate of 42.0 tons per hour (as clinker), with PM emissions controlled by one (1) electrostatic precipitator (ESP #1), identified as CE401, and exhausting to one (1) stack, identified as EP401. Raw material sources include clay, sand, limestone, and other sources of silica, alumina, iron, calcium, magnesium, and trace elements.

#### **Clinker Cooler #1 Facilities**

- (136) One (1) clinker cooler #1, identified as EU412, constructed in 1962, with a nominal production rate of 42.0 tons per hour, with PM emissions controlled by one (1) baghouse, identified as baghouse 107 and CE404, and exhausting to one (1) stack, identified as EP404.

#### **Clinker Cooler #2 Facilities**

- (137) One (1) clinker cooler #2, identified as EU421, constructed in 1962, with a nominal production rate of 42.0 tons per hour, with PM emissions controlled by one (1) baghouse, identified as baghouse 111 and CE407, and exhausting to one (1) stack, identified as EP404.

### **Unpermitted Emission Units and Pollution Control Equipment**

There are no unpermitted facilities operating at this source during this review process.

### **New Emission Units and Pollution Control Equipment**

There are no new facilities.

### **Insignificant Activities**

The source also consists of the following insignificant activities, as defined in 326 IAC 2-7-1(21):

- (1) Space heaters, process heaters, or boilers using the following fuels:
  - (A) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour.
  - (B) Fuel oil-fired combustion sources with heat input equal to or less than two million (2,000,000) Btu per hour and firing fuel containing less than five-tenths (0.5) percent sulfur by weight.
- (2) Propane or liquefied petroleum gas, or butane-fired combustion sources with heat input equal to or less than six million (6,000,000) Btu per hour.
- (3) A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling of tanks, locomotives, automobiles, having a storage capacity less than or equal to 10,500 gallons.
- (4) The following VOC and HAP storage containers:
  - (A) Storage tanks with capacity less than or equal to 1,000 gallons and annual throughput less than 12,000 gallons.
  - (B) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids.
- (5) Refractory storage not requiring air pollution control equipment.
- (6) Closed loop heating and cooling systems.
- (7) Water runoff ponds for petroleum coke-cutting and coke storage piles.
- (8) Any operation using aqueous solutions containing less than 1% by weight of VOCs excluding HAPs.
- (9) Forced and induced draft cooling tower system not regulated under a NESHAP.
- (10) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.

- (11) Paved and unpaved roads and parking lots with public access.
- (12) Underground conveyors.
- (13) Equipment used to collect any material that might be released during a malfunction, process upset, or spill cleanup, including catch tanks, temporary liquid separators, tanks, and fluid handling equipment.
- (14) Emergency generators as follows:
  - (A) Diesel generators not exceeding 1600 horsepower.
- (15) Purge double block and bleed valves.
- (16) A laboratory as defined in 326 IAC 2-7-1(21)(D).
- (17) Other categories with emissions below insignificant thresholds as follows:
  - (A) Liquid waste derived fuel storage facility includes four 40,000 gallon, one 33,000 gallon, one 29,000 gallon, and one 22,000 gallon storage tanks.

### Existing Approvals

The source has constructed or has been operating under the following approvals:

- (1) OP 09-03-90-0146, issued on August 6, 1986.
- (2) OP 09-03-90-0147, issued on August 6, 1986.
- (3) OP 09-03-90-0148, issued on August 6, 1986.
- (4) OP 09-03-90-0149, issued on August 6, 1986.
- (5) OP 09-03-90-0150, issued on August 6, 1986.
- (6) OP 09-03-90-0151, issued on August 6, 1986.
- (7) OP 09-03-90-0152, issued on August 6, 1986.
- (8) CP 017-6031, issued on September 24, 1996.
- (9) Significant Source Modification 017-11593-00005, issued on March 8, 2000.

All conditions from previous permits issued pursuant to permitting programs approved into the state implementation plan have been either incorporated as originally stated, revised, or deleted by this permit. All previous registrations and permits are superseded by this permit.

The following terms and conditions from previous approvals have been determined no longer applicable; therefore, were not incorporated into this Part 70 permit:

- (1) All construction conditions from all previously issued permits.

Reason not incorporated:

All facilities previously permitted have already been constructed; therefore, the construction conditions are no longer necessary as part of the operating permit. Any facilities that were previously permitted but have not yet been constructed would need new pre-construction approval before beginning construction.

- (2) OP 09-03-90-0146, issued on August 6, 1986.

Emission unit description:

The primary and secondary crushing operations at the Portland Cement plant, located five miles southwest of Logansport off State Road 25. Emissions from these operations are controlled by a water spray dust suppressant and individual baghouses.

Reason not incorporated:

This permit covers the primary and secondary crushers. The requirement for the water spray dust suppressant may apply to EU115 (apron feeder transfer to primary crusher) and EU120 (screen transfers) but it is not clear that those are the operations covered by this requirement.

## **Enforcement Issue**

The EPA has issued a notice of violation alleging that the kilns are not in compliance with the requirements of PSD. The EPA alleges that ESSROC made modifications to the kilns, and began using pet coke as a fuel in the kilns, both of which triggered the requirements of PSD. This case is on-going and has not yet been resolved; therefore, no detailed compliance plan has been established. IDEM has included language in the Part 70 permit stating that the permit shield will not apply to the kilns with regards to the requirements of 326 IAC 2-2 (PSD). Once the enforcement case has been resolved, IDEM will reopen the permit to establish the permit shield for the kilns and, if necessary, include the provisions of the compliance plan in the Part 70 permit.

## **Recommendation**

The staff recommends to the Commissioner that the Part 70 permit be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An administratively complete Part 70 permit application for the purposes of this review was received on May 31, 1996. Additional information was received on October 20, 1998, February 22, 1999, May 3, 1999, March 2, 2000, and April 12, 2000. A notice of completeness was mailed to the source on March 11, 1997.

## Emission Calculations

See Appendix A of this document for detailed emissions calculations.

## Potential Emissions

Pursuant to 326 IAC 1-2-55, Potential Emissions are defined as “emissions of any one (1) pollutant which would be emitted from a facility, if that facility were operated without the use of pollution control equipment unless such control equipment is necessary for the facility to produce its normal product or is integral to the normal operation of the facility.”

Pollutant	Potential Emissions (tons/year)
PM	greater than 250
PM-10	greater than 250
SO <sub>2</sub>	greater than 250
VOC	less than 100
CO	greater than 250
NO <sub>x</sub>	greater than 250

Note: For the purpose of determining Title V applicability for particulates, PM-10, not PM, is the regulated pollutant in consideration.

HAP's	Potential Emissions (tons/year)
Arsenic compounds	less than 10
Benzene	less than 10
Beryllium compounds	less than 10
Biphenyl	less than 10
Bis(2-ethylhexyl)phthalate	less than 10
Bromomethane	less than 10
Cadmium compounds	less than 10
Carbon disulfide	less than 10
Chlorobenzene	less than 10
Chloromethane	less than 10
Chromium compounds	less than 10
Di-n-butylphthalate	less than 10
Ethylbenzene	less than 10
Formaldehyde	less than 10
Hydrogen chloride	greater than 10
Lead compounds	less than 10
Manganese compounds	less than 10
Methyl ethyl ketone	less than 10
Methylene chloride	less than 10
Mercury compounds	less than 10
Naphthalene	less than 10
Phenol	less than 10
Selenium compounds	less than 10
Styrene	less than 10
Toluene	less than 10

HAP's	Potential Emissions (tons/year)
Total PCDF	less than 10
Total TCDF	less than 10
Xylenes	less than 10
TOTAL	greater than 25

Note: The emissions for HAPs were determined through use of AP-42 emission factors. The emission factors are based on controlled emissions. Potential emissions may be greater than those stated above.

- (a) The potential emissions (as defined in the Indiana Rule) of  $PM_{10}$ , CO,  $NO_x$ , and  $SO_2$  are equal to or greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.
- (b) The potential emissions (as defined in Indiana Rule) of any single HAP are equal to or greater than ten (10) tons per year and the potential emissions (as defined in Indiana Rule) of a combination HAPs are greater than or equal to twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.
- (c) Fugitive Emissions  
Since this type of operation is one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive emissions are counted toward determination of PSD and Emission Offset applicability.

### Actual Emissions

The following table shows the actual emissions from the source. This information reflects 2001 emission data.

Pollutant	Actual Emissions (tons/year)
PM	not reported
PM-10	326
$SO_2$	1821
VOC	66
CO	1852
$NO_x$	1643
HAPs	no data

### County Attainment Status

The source is located in Cass County.

Pollutant	Status
PM-10	Attainment
$SO_2$	Attainment
Ozone	Attainment
CO	Attainment
Lead	Attainment

- (a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Cass County has been designated as attainment or unclassifiable for ozone.

- (b) Cass County has been classified as attainment or unclassifiable for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

## **Part 70 Permit Conditions**

This source is subject to the requirements of 326 IAC 2-7, pursuant to which the source has to meet the following:

- (1) Emission limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of issuance of Part 70 permits.
- (2) Monitoring and related record keeping requirements which assume that all reasonable information is provided to evaluate continuous compliance with the applicable requirements.

## **Federal Rule Applicability**

### **40 CFR 60, Subpart F (Performance Standards for Portland Cement Plants)**

Pursuant to 40 CFR 63.1356, the requirements of the NSPS Subpart F shall be ineffective after June 14, 2002, because the Portland Cement MACT shall supersede the requirements of this NSPS. The following analysis only serves to document which emission units were subject to the NSPS Subpart F prior to the effective date of the NESHAP for Portland Cement Plants 40 CFR 63, Subpart LLL.

The following affected facilities at ESSROC were subject to the requirements of the New Source Performance Standard, 326 IAC 12, (40 CFR 60.60, Subpart F) because they were either constructed or modified after the applicability date of August 17, 1971:

EU 213 east flyash truck unloading  
EU 421 clinker cooler #2  
EU 210 west flyash truck unloading

The affected facilities were required to comply with the following standards:

- (1) The kiln shall be limited to 0.30 pound per ton of feed (dry basis) to the kiln and less than 20% opacity.
- (2) The clinker cooler shall be limited to 0.10 pound per ton of feed (dry basis) to the kiln and less than 10% opacity.
- (3) All other affected facilities shall be limited to less than 10% opacity.

The following facilities that were altered after August 17, 1971, were not considered modifications for the purpose of Subpart F:

- (1) Clinker conveyor transfer system (EU504) - Although the clinker conveyor transfer system was constructed (1975) after the applicability date of August 17, 1971, conveyors are not considered affected facilities for the purposes of Subpart F. Subpart F considers the



conveyor transfer points the affected facilities. Since the clinker conveyor transfer system replaced an existing conveyor, the transfer points already existed. Therefore, no modification occurred due to this addition.

- (2) The bulk truck loadout systems, constructed in 1965 - Although the bulk truck loadout systems were changed in 1992 and 1995, the changes consisted only of reshaping the loadout chutes, which had no effect on emissions. Also, the cost of the changes was minimal and much less than the cost of reconstruction. Therefore, no modification occurred due to these changes.

The rest of the facilities at ESSROC were not subject to the New Source Performance Standard, 326 IAC 12, (40 CFR 60.60, Subpart F) because they were constructed prior to the applicability date of August 17, 1971.

40 CFR 60, Subpart OOO (Performance Standards for Nonmetallic Mineral Processing Plants)  
None of the facilities at ESSROC are subject to the New Source Performance Standard 326 IAC 12, 40 CFR 60.670 (Subpart OOO) because they were constructed prior the applicability date of August 31, 1983 or they are subject to 40 CFR 60.60 (Subpart F).

40 CFR 60, Subparts K and Ka (Performance Standards for Petroleum Storage Tanks)  
None of the petroleum storage tanks at ESSROC are subject to the New Source Performance Standard 326 IAC 12, 40 CFR 60.110 (Subpart K), or 40 CFR 60.110a (Subpart Ka) because all petroleum storage tanks have capacities less than 40,000 gallons.

40 CFR 60, Subpart Kb (Performance Standards for Volatile Organic Liquid Storage Tanks)  
None of the storage tanks at ESSROC are subject to the New Source Performance Standard 326 IAC 12, 40 CFR 60.110b (Subpart Kb) because the tanks have capacities less than 10,500 gallons, or do not contain a substance categorized as a volatile organic liquid (VOL).

40 CFR 60.730 Subpart UUU (Standards of Performance for Calciners and Dryers in Mineral Industries)  
None of the facilities at this source are subject to the requirements of the NSPS 326 IAC 12, 40 CFR 60.730 (Subpart UUU) because the source does not fit the definition of a mineral processing plant.

40 CFR 63.460 Subpart T (NESHAP for Halogenated Solvent Degreasers)  
The parts washer at this source is not subject to the requirements of the National Emissions Standards for Hazardous Air Pollutants (NESHAP) 326 IAC 20-1, 40 CFR 63.460 (Subpart T) because they do not utilize a solvent containing methylene chloride, perchloroethylene, trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride, or chloroform, or any combination of these halogens, in a total concentration greater than five percent by weight.

40 CFR 60.250 Subpart Y (Standards of Performance for Coal Preparation Plants)  
The coal processing facilities at this source meet the definition of a coal preparation plant because they do pulverize coal. This rule establishes particulate emission limitations for the coal mills that have commenced construction or modification after October 24, 1974. The coal mills are not considered "thermal dryers" for the purposes of this rule because they do not exhaust to the atmosphere. The coal mills exhaust to the kilns.

The following affected facilities at ESSROC are subject to the requirements of the New Source Performance Standard, 326 IAC 12, (40 CFR 60, Subpart Y) because they were either constructed or modified after the applicability date of October 24, 1974:

- (1) Coal mill #1; and
- (2) Coal mill #2.

Pursuant to 40 CFR 60.252(c), the following conditions shall apply:

- (1) The opacity from each of these facilities shall be less than 20 percent.
- (2) The Permittee shall conduct a Method 9 opacity test to determine compliance with the opacity limits.

The rest of the coal processing facilities at ESSROC are not subject to the requirements of the New Source Performance Standard, 326 IAC 12, (40 CFR 60, Subpart Y) because they were constructed prior to the applicability date of October 24, 1974.

#### 40 CFR 63 (National Emission Standards for Hazardous Air Pollutants)

- (1) None of the quarry facilities/emission units or raw material sizing facilities/emission units listed in this section are subject to the requirements of the National Emissions Standards for Hazardous Air Pollutants (NESHAP) 40 CFR 63 Subparts A and LLL, because they are not affected facilities under this rule. These facilities/emission units precede the raw material storage, which is just prior to the raw mill, in the sequence of materials handling operations. The rule specifically states that for portland cement plants with on-site nonmetallic mineral processing facilities, the first affected source in the sequence of materials handling operations subject to the rule is the raw material storage, which is just prior to the raw mill. The rule states that the primary and secondary crushers and any other equipment of the on-site nonmetallic mineral processing plant which precedes the raw material storage are not subject to this rule. Furthermore, the rule states that the first conveyor transfer point subject to this rule is the transfer point associated with the conveyor transferring material from the raw material storage to the raw mill.
- (2) None of the cement kiln dust storage and handling facilities/emission units at this source are subject to the requirements of the National Emissions Standards for Hazardous Air Pollutants (NESHAP) 40 CFR 63 Subparts A and LLL, because they are not considered affected facilities under this rule.
- (3) The kilns are not subject to the requirements of the National Emissions Standards for Hazardous Air Pollutants (NESHAP) 40 CFR 63 Subparts A and LLL because they burn hazardous waste and are therefore, subject to the requirements of 40 CFR 63, Subpart EEE for hazardous waste combustors. When not burning hazardous waste, the kilns are still subject to the requirements of 40 CFR 63, Subpart EEE; however they may elect to comply with alternate limits. The alternate limits will be equivalent to the limits required for kilns subject to the NESHAP 40 CFR 63, Subpart LLL for Portland Cement Plants.

Pursuant to 40 CFR 63.1206(b), the emission standards and operating requirements of 40 CFR 63, Subpart EEE, shall not apply during those periods of operation when hazardous waste is not in the combustion chamber and the Permittee has:

- (A) Submitted a one-time written notice to the Administrator documenting compliance with all applicable requirements and standards promulgated under authority of the Clean Air Act, including Sections 112 and 129; and
- (B) Documented in the operating record that the source is complying with such

applicable requirements in lieu of the emission standards and operating requirements of this subpart.

During those periods of operation when hazardous waste is not in the combustion chamber and the Permittee has complied with (A) and (B) above, the following conditions shall apply instead of the limits listed in Condition D.3.5.

- (a) Particulate matter (PM) emissions shall be limited to 0.30 pound per ton of feed (dry basis) to the kiln.
- (b) Visible emissions shall be limited to twenty percent (20%) opacity.
- (c) Dioxin/Furan emissions shall be limited to  $8.7 \times 10^{-11}$  grains per dry standard cubic foot (TEQ) corrected to seven percent oxygen; or  $1.7 \times 10^{-10}$  grains per dry standard cubic foot (TEQ) corrected to seven percent oxygen, when the average of the performance test run average temperatures at the inlet to the particulate matter control device is 400 degrees Fahrenheit or less.
- (d) The kilns shall be operated such that the temperature of the gas at the inlet to the kiln's particulate matter control device does not exceed the average of the run average temperatures determined during the performance tests required in 40 CFR 63, Subpart EEE.

The rest of the facilities at ESSROC are subject to the requirements of 40 CFR 63, Subpart LLL (National Emission Standards for Hazardous Air Pollutants (NESHAP) from the Portland Cement Manufacturing Industry). A summary of the applicable requirements is as follows:

- (1) Pursuant to this rule the provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 20-1, apply except when otherwise specified in 40 CFR Part 63, Subpart LLL.
- (2) Pursuant to this rule the following conditions shall apply to all the affected facilities except the kilns and clinker coolers:
  - (a) The visible emissions from each facility shall not exceed ten percent (10%) opacity.
  - (b) Pursuant to 40 CFR 63.1350 (Monitoring Requirements), the Permittee shall prepare a written operations and maintenance plan for the affected facilities by June 14, 2002, which is the compliance date for the National Emission Standards for Hazardous Air Pollutants (NESHAP) from the Portland Cement Manufacturing Industry. The plan shall include the following information:
    - (I) Procedures for proper operation and maintenance of these facilities and associated air pollution control device(s).
    - (II) Procedures to be used to periodically monitor the affected facilities, which are subject to opacity standards under 40 CFR 63.1348. Such procedures must include the following provisions:
      - (A) The Permittee shall conduct a monthly 1-minute visible emissions test of each affected source in accordance with 40 CFR 60,

Appendix A, Method 22. The test must be conducted while the affected source is in operation.

- (B) If no visible emissions are observed in six consecutive monthly tests for any affected source, the Permittee may decrease the frequency of testing from monthly to semi-annually for that affected source. If visible emissions are observed during any semi-annual test, the Permittee shall resume testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.
  - (C) If no visible emissions are observed during the semi-annual test for any affected source, the Permittee may decrease the frequency of testing from semi-annually to annually for that affected source. If visible emissions are observed during any annual test, the Permittee shall resume testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.
  - (D) If visible emissions are observed during any Method 22 test, the Permittee must conduct a 6-minute test of opacity in accordance with 40 CFR 60, Appendix A, Method 9. The Method 9 test must begin within one hour of any observation of visible emissions.
- (c) Pursuant to 40 CFR 63.1350 (Monitoring Requirements), the Permittee shall monitor opacity from the raw mills and finish mills by conducting daily visual emissions observations of the mill sweep and air separator particulate matter control devices (PMCDs), in accordance with the procedures of 40 CFR 60, Appendix A, Method 22. The Method 22 test shall be conducted while the affected source is operating at the highest load or capacity level reasonably expected to occur within the day. The duration of the Method 22 test shall be six minutes. If visible emissions are observed during any Method 22 visible emissions test, the Permittee must initiate, within one (1) hour, the corrective actions specified in the site specific operations and maintenance plan developed in accordance with 40 CFR 63.1350(a)(1) and (a)(2); and conduct a follow-up Method 22 test. If visible emissions are observed, then within 24 hours of the end of the Method 22 test in which the visible emissions were observed, the Permittee must conduct a visual opacity test of each stack from which visible emissions were observed, in accordance with 40 CFR 60, Appendix A, Method 9. The duration of the Method 9 test shall be thirty minutes.

Failure to comply with any provision of the operations and maintenance plan shall be a violation of the standard.

- (d) To document compliance with the NESHAP, the Permittee shall report the information required by 40 CFR 63.1354, including, but not limited to the following:
  - (I) The operations and maintenance plan shall be submitted to IDEM, OAQ and U.S. EPA by June 14, 2002, which is the compliance date for the National Emission Standards for Hazardous Air Pollutants (NESHAP) from the Portland Cement Manufacturing Industry.

- (II) As required by 40 CFR 63.10(d)(2), the Permittee shall report the results of performance tests as part of the notification of compliance status.
  - (III) As required by 40 CFR 63.10(d)(3), the Permittee shall report the opacity results from tests required by 40 CFR 63.1349.
  - (IV) As required by 40 CFR 63.10(d)(5), if actions taken by the Permittee during a startup, shutdown, or malfunction of an affected source (including actions taken to correct a malfunction) are consistent with the procedures specified in the source's startup, shutdown, and malfunction plan specified in 40 CFR 63.6(e)(3), the Permittee shall state such information in a semiannual report. Reports shall only be required if a startup, shutdown, or malfunction occurred during the reporting period. The startup, shutdown, and malfunction report may be submitted simultaneously with the excess emissions and continuous monitoring system performance reports.
  - (V) Pursuant to 40 CFR 63.10(d)(5)(ii), any time an action taken by the Permittee during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) is not consistent with the procedures in the startup, shutdown, and malfunction plan, the Permittee shall report the actions taken for that event within 2 working days after commencing actions inconsistent with the plan, by telephone call or facsimile (FAX) transmission. The immediate report shall be followed by a letter within 7 working days after the end of the event, certified by the Permittee, explaining the circumstances of the event, the reasons for not following the startup, shutdown, and malfunction plan, and whether any excess emissions and/or parameter monitoring exceedances are believed to have occurred.
- (3) Pursuant to this rule the following conditions shall apply to the clinker coolers (EU19, EU21, and EU23):
- (a) Pursuant to 40 CFR 63.1348 (Emissions Standards and Operating Limits), on and after June 14, 2002, which is the compliance date for the National Emission Standards for Hazardous Air Pollutants (NESHAP) from the Portland Cement Manufacturing Industry, each clinker cooler) shall be limited as follows:
    - (I) Particulate matter (PM) emissions shall be limited to 0.10 pound per ton of feed (dry basis) to the kiln.
    - (II) Visible emissions shall be limited to ten percent (10%) opacity.
  - (b) Pursuant to 40 CFR 63.1349, within 180 days after June 14, 2002, which is the compliance date for the Portland Cement Manufacturing Industry NESHAP, the Permittee shall demonstrate initial compliance with the PM and opacity limits by conducting performance tests in accordance with 40 CFR 63.1349 and Methods 5 and 9 of 40 CFR Part 60, Appendix A, respectively.
  - (c) Pursuant to 40 CFR 63.1349, compliance with the applicable PM limitations shall be determined by performance tests once every 2 ½ years, conducted in

accordance with Section C - Performance Testing. The Permittee shall perform PM testing utilizing Methods 5 (40 CFR 60, Appendix A), or other methods as approved by the Commissioner.

- (d) Pursuant to 40 CFR 63.1350 (Monitoring Requirements), on and after June 14, 2002, which is the compliance date for the National Emission Standards for Hazardous Air Pollutants (NESHAP) from the Portland Cement Manufacturing Industry, the Permittee shall perform the following monitoring requirements:
  - (I) The Permittee shall have prepared a written operations and maintenance plan for the clinker coolers. The plan shall include the procedures for proper operation and maintenance of the clinker coolers and associated air pollution control device(s) in order to meet the emissions limit. Failure to comply with any provision of the operations and maintenance plan shall be a violation of the standard.
  - (II) The Permittee shall continuously monitor opacity of emissions at the outlet of the PM control device. The COM shall be used to monitor opacity emissions in accordance with the NESHAP and shall be installed, maintained, calibrated and operated as required by 40 CFR 63, Subpart A and according to 40 CFR 60, Appendix B, PS-1.
- (e) Pursuant to 40 CFR 63.1354, beginning June 14, 2002, the Permittee shall submit a continuous monitoring system (CMS) performance report with the excess opacity summaries, in accordance with 40 CFR 63.1354(8) and 40 CFR 63, Subpart A.
- (f) Pursuant to 40 CFR 63.1354, beginning June 14, 2002, the Permittee shall submit a semi-annual summary report which contains the information specified in 40 CFR 63.10(e)(3)(vi), as well as all failures to comply with any provision of the operation and maintenance plan developed in accordance with 40 CFR 63.1350(a). If the total continuous monitoring system (CMS) downtime for any CEM or any CMS for the reporting period is ten percent or greater of the total operating time for the reporting period, the Permittee shall submit an excess emissions and CMS performance report along with the summary report.
- (g) Pursuant to 40 CFR 63.1354, the Permittee shall report the information required by 40 CFR 63.1354, including, but not limited to the following:
  - (I) The operations and maintenance plan shall be submitted to IDEM, OAQ and U.S. EPA by June 14, 2002, which is the compliance date for the National Emission Standards for Hazardous Air Pollutants (NESHAP) from the Portland Cement Manufacturing Industry.
  - (II) As required by 40 CFR 63.10(d)(2), the Permittee shall report the results of performance tests.
  - (III) As required by 40 CFR 63.10(d)(3), the Permittee shall report the opacity results from tests required by 40 CFR 63.1349.
  - (IV) As required by 40 CFR 63.10(d)(5), if actions taken by the Permittee during a startup, shutdown, or malfunction of an affected source (including

actions taken to correct a malfunction) are consistent with the procedures specified in the source's startup, shutdown, and malfunction plan specified in 40 CFR 63.6(e)(3), the Permittee shall state such information in a semiannual report. Reports shall only be required if a startup, shutdown, or malfunction occurred during the reporting period. The startup, shutdown, and malfunction report may be submitted simultaneously with the excess emissions and continuous monitoring system performance reports.

- (V) Pursuant to 40 CFR 63.10(d)(5)(ii), any time an action taken by the Permittee during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) is not consistent with the procedures in the startup, shutdown, and malfunction plan, the Permittee shall report the actions taken for that event within 2 working days after commencing actions inconsistent with the plan, by telephone call or facsimile (FAX) transmission. The immediate report shall be followed by a letter within 7 working days after the end of the event, certified by the Permittee, explaining the circumstances of the event, the reasons for not following the startup, shutdown, and malfunction plan, and whether any excess emissions and/or parameter monitoring exceedances are believed to have occurred.

#### 40 CFR 63, Subpart EEE (National Emission Standards for Hazardous Air Pollutants)

The kilns are subject to the requirements of 40 CFR 63, Subpart EEE, National Emission Standards for Hazardous Air Pollutants from Hazardous Waste Combustors. The source must comply with the provisions of this rule by September 30, 2002. The requirements of this rule include, but are not limited to, the following:

##### **Emission Limits**

- (1) Dioxin/Furan emissions shall be limited to  $8.7 \times 10^{-11}$  grains per dry standard cubic foot (TEQ) corrected to seven percent oxygen; or  $1.7 \times 10^{-10}$  grains per dry standard cubic foot (TEQ) corrected to seven percent oxygen, when the average of the performance test run average combustion gas temperatures at the inlet to the particulate matter control device is 400 degrees Fahrenheit or less.
- (2) Mercury emissions shall be limited to 120 micrograms/dscm corrected to seven percent oxygen.
- (3) Lead and cadmium combined emissions shall be limited to 240 micrograms/dscm corrected to seven percent oxygen.
- (4) Arsenic, beryllium, and chromium combined emissions shall be limited to 56 micrograms/dscm corrected to seven percent oxygen.
- (5) Carbon monoxide and hydrocarbon emissions shall comply with either (1) or (2) below:
  - (a) Hydrocarbons in the main stack shall not exceed 20 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to seven percent oxygen, and reported as propane; or

- (b) Carbon monoxide in the main stack shall not exceed 100 parts per million by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis and corrected to seven percent oxygen, and hydrocarbons in the main stack shall not exceed 20 parts per million by volume over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to seven percent oxygen, and reported as propane, at any time during the destruction and removal efficiency (DRE) test runs or their equivalent as provided by 40 CFR 63.1206(b)(7).
- (6) Hydrochloric acid and chlorine gas combined emissions shall not exceed 130 parts per million by volume, expressed as hydrochloric acid equivalents, dry basis, corrected to seven percent oxygen.
- (7) Particulate matter (PM) emissions shall be limited to 0.30 pound per ton of feed (dry basis) to the kiln.
- (8) Visible emissions shall be limited to twenty percent (20%) opacity.

#### **Testing Requirements**

- (1) Within 180 days after September 30, 2002, which is the compliance date for the National Emission Standards for Hazardous Air Pollutants (NESHAP) for the Hazardous Waste Combustors, the Permittee shall demonstrate initial compliance with the emission limits established in 40 CFR 63, Subpart EEE by commencing initial comprehensive performance tests in accordance with 40 CFR 63.1207 and Section C - Performance Testing. These tests shall also establish limits for the operating parameters provided by 40 CFR 63.1209, and demonstrate compliance with the performance specifications for continuous monitoring systems. The testing must be completed within 60 days after the date of commencement. These tests shall be repeated at least once every 2.5 years from the date of this valid compliance demonstration.
- (2) During each stack test required above, the following items shall be performed:
  - (a) Certified continuous opacity monitoring (COM) data shall be observed and recorded or EPA Method 9 opacity tests shall be performed.
  - (b) The kiln temperature and oxygen concentration shall be measured and recorded.
  - (c) The clinker production rate shall be measured and recorded. The kilns must be operating at 95 percent of its maximum production capacity or more during the performance tests to be considered a valid test.

#### **Monitoring Requirements**

- (1) Pursuant to 40 CFR 63, a continuous monitoring system shall be installed, calibrated, maintained, and operated for measuring the opacity from the kilns. The continuous monitoring system shall be installed and operational prior to conducting the performance tests. The continuous monitoring systems shall meet the performance specifications of 40 CFR 63.8(c).
- (2) Pursuant to 40 CFR 63, a continuous monitoring system shall be installed, calibrated, maintained, and operated to demonstrate compliance with the carbon monoxide and



hydrocarbon limits specified in 40 CFR 63. An oxygen CEMS shall also be installed, calibrated, maintained, and operated to continuously correct the carbon monoxide and hydrocarbon levels to 7 percent oxygen.

- (3) The Permittee shall install, calibrate, maintain and operate a particulate matter continuous emission monitoring system (PM CEMS) to measure the particulate matter discharged to the atmosphere. The compliance deadline for installing the PM CEMS and all requirements relating to performance of the PM CEMS and implementation of the PM CEMS requirement is deferred pending further rulemaking.
- (4) The Permittee shall have prepared a written operations and maintenance plan for kiln #1 and kiln #2. The plan shall include the following information:
  - (A) Procedures for proper operation, inspection, maintenance, and corrective measures for all components of kiln #1 and kiln #2 and associated air pollution control device(s) in order to meet the emissions limits in this rule; and
  - (B) Procedures for operating and maintaining the kilns in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels achieved during the comprehensive performance test.

Failure to comply with any provision of the operations and maintenance plan shall be a violation of the standard.

- (5) The Permittee shall perform the monitoring requirements specified in 40 CFR 63.1209

#### **Record keeping Requirements**

To document compliance with the NESHAP (after September 30, 2002), the Permittee shall maintain all records required by 40 CFR 63.1210 and 40 CFR 63.1211, including, but not limited to, the following:

- (1) The Permittee shall maintain files of all information (including all reports and notifications) required by this rule recorded in a form suitable and readily available for inspection and review as required by 40 CFR 63.10(b)(1).
- (2) The Permittee shall maintain records for each affected source including:
  - (A) All documentation supporting initial notifications and notifications of compliance status.
  - (B) All records of applicability determination, including supporting analyses.
- (3) The Permittee shall maintain all records of continuous monitoring system data.

#### **Reporting Requirements**

- (1) Beginning September 30, 2002, the Permittee shall submit a continuous monitoring system (CMS) performance report with the excess opacity summaries, in accordance with 40 CFR 63.10(e)(3) and 40 CFR 63, Subpart A.
- (2) Beginning September 30, 2002, the Permittee shall submit a semi-annual summary report

which contains the information specified in 40 CFR 63.10(e)(3)(vi). If the total continuous monitoring system (CMS) downtime for any CEM or any CMS for the reporting period is ten percent or greater of the total operating time for the reporting period, the Permittee shall submit an excess emissions and CMS performance report along with the summary report.

- (3) To document compliance with the NESHAP, the Permittee shall report the information required by 40 CFR 63.1354, including, but not limited to the following:
  - (A) Compliance progress reports as required by 40 CFR 63.1211(b) and 40 CFR 63.10(d)(4).
  - (B) As required by 40 CFR 63.10(d)(2), the Permittee shall report the results of performance tests as part of the notification of compliance status, required in Section C - NESHAP Notification and Reporting Requirements.
  - (C) As required by 40 CFR 63.10(d)(3), the Permittee shall report the opacity results from tests required by 40 CFR 63.1349.
  - (D) As required by 40 CFR 63.10(d)(5), if actions taken by the Permittee during a startup, shutdown, or malfunction of an affected source (including actions taken to correct a malfunction) are consistent with the procedures specified in the source's startup, shutdown, and malfunction plan specified in 40 CFR 63.6(e)(3), the Permittee shall state such information in a semiannual report. Reports shall only be required if a startup, shutdown, or malfunction occurred during the reporting period. The startup, shutdown, and malfunction report may be submitted simultaneously with the excess emissions and continuous monitoring system performance reports.
  - (E) Pursuant to 40 CFR 63.10(d)(5)(ii), any time an action taken by the Permittee during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) is not consistent with the procedures in the startup, shutdown, and malfunction plan, the Permittee shall report the actions taken for that event within 2 working days after commencing actions inconsistent with the plan, by telephone call or facsimile (FAX) transmission. The immediate report shall be followed by a letter within 7 working days after the end of the event, certified by the Permittee, explaining the circumstances of the event, the reasons for not following the startup, shutdown, and malfunction plan, and whether any excess emissions and/or parameter monitoring exceedances are believed to have occurred.
- (4) Pursuant to 40 CFR 63.1206(c)(3)(vi), the Permittee shall report excessive exceedances.
- (5) Pursuant to 40 CFR 63.1206(c)(4)(iv), the Permittee shall report emergency safety vent openings.

40 CFR 61, Subpart FF (National Emission Standards for Hazardous Air Pollutants)

This source is subject to the requirements of 40 CFR 61, Subpart FF, National Emission Standard for Benzene Waste Operations because the source is a hazardous waste treatment, storage, and disposal facility which receives benzene containing waste from facilities listed in 40 CFR 61.340(a). The requirements of this subpart pertain to all of the hazardous waste tanks, the activated carbon canister system, the kiln, hazardous waste tank trucks and rail cars, and all connecting vent piping. The requirements of this rule include, but are not limited to, the following:

### **Standards**

- (1) The Permittee shall design, install, operate, and maintain a treatment process (cement kiln) that destroys benzene in the waste stream by incinerating the waste in a combustion unit that achieves a destruction efficiency of 99 percent or greater for benzene and has been issued a final permit under 40 CFR Part 270.
- (2) Each tank shall be covered by a fixed roof and vented through a closed-vent system that routes all organic vapors vented from the tank to the activated carbon canister system.
- (3) Each opening in the fixed-roof for a tank shall be maintained in a closed, sealed position at all times that waste is in the tank except when it is necessary to use the opening for waste sampling or removal, or for equipment inspection, maintenance, or repair.
- (4) Each opening in the fixed-roof for a container shall be maintained in a closed, sealed position at all times that waste is in the container except when it is necessary to use the opening for waste loading, removal, inspection, or sampling.
- (5) The activated carbon canister system shall control the organic emissions vented to it with an efficiency of 95 weight percent or greater.
- (6) Closed-vent systems that contain devices that vent directly to the atmosphere shall remain in a closed, sealed position during normal operations except when the device needs to open to prevent physical damage or permanent deformation of the closed-vent system.
- (7) The closed-vent system and activated carbon canister shall be operated at all times when waste is placed in the tank vented to the control device except when maintenance or repair of the tank cannot be completed without a shutdown of the control device.

### **Testing Requirements**

- (1) Each opening in the kiln shall be designed to operate with no detectable emissions indicated by an instrument reading of less than 500 ppmv above background as determined initially and thereafter at least once per year by the methods specified in 40 CFR 61.355(h).
- (2) The cover and all openings for each tank shall be designed to operate with no detectable emissions in accordance with 40 CFR 61.355(h).
- (3) The cover and all openings for each container shall be designed to operate with no detectable emissions in accordance with 40 CFR 61.355(h).
- (4) The closed-vent system shall be designed to operate with no detectable emissions in accordance with 40 CFR 61.355(h).
- (5) Pursuant to 61.349(c)(1), the Permittee shall demonstrate compliance using engineering calculations that includes a design analysis that addresses the items specified in 40 CFR 61.356(f)(2)(i)(G).

### **Monitoring Requirements**

- (1) The pressure in the kiln shall be monitored continuously to ensure that the pressure remains below atmospheric pressure.
- (2) Pursuant to 61.349(h), the Permittee must monitor the activated carbon canister system in accordance with 40 CFR 61.354(c).

### **Inspection Requirements**

- (1) Each fixed-roof, seal, access door, and all other openings in the tank shall be checked by visual inspection quarterly to ensure that no cracks or gaps occur and that access doors and other openings are closed and gasketed properly. Except as provided in 40 CFR 61.350, when a broken seal or gasket or other problem is identified, or when detectable emissions are measured, first efforts at repair shall be made as soon as practicable, but not later than 45 calendar days after identification.
- (2) Each cover and all openings in the container shall be checked by visual inspection initially and quarterly thereafter to ensure that they are closed and gasketed properly. Except as provided in 40 CFR 61.350, when a broken seal or gasket or other problem is identified, or when detectable emissions are measured, first efforts at repair shall be made as soon as practicable, but not later than 15 calendar days after identification.
- (3) Each closed-vent system and control device shall be visually inspected quarterly. The visual inspection shall include inspection of the ductwork, piping, and connections to covers and control devices for evidence of visible defects such as holes in ductwork or piping and loose connections. Except as provided in 40 CFR 61.350, if visible defects are observed during an inspection, or if other problems are identified, or if detectable emissions are measured, a first effort to repair the closed-vent system and control device shall be made as soon as practicable but no later than 5 calendar days after detection. Repair shall be completed no later than 15 calendar days after the emissions are detected or the visible defect is observed.

### **Record Keeping and Reporting Requirements**

The Permittee shall comply with the record keeping requirements of 40 CFR 61.356 and reporting requirements of 40 CFR 61.357.

#### **40 CFR 63, Subpart DD and 40 CFR 61, Subpart V (National Emission Standards for Hazardous Air Pollutants)**

This source is subject to the requirements of 40 CFR 63, Subpart DD, National Emission Standard for Hazardous Air Pollutants from Off-Site Waste and Recovery Operations, because the plant is a major source of hazardous air pollutant (HAP) emissions and the facility is regulated as a hazardous waste treatment, storage, and disposal facility which receives off-site material as specified in paragraph 40 CFR 63.680(b). Pursuant to 40 CFR 63.683(b)(2), off-site material management units subject to 40 CFR 61, Subpart FF and in compliance with the provisions specified in 40 CFR Part 61, Subpart FF are exempt from the requirements of controlling air emissions in accordance with 40 CFR, Subpart DD, Sections 63.685 through 63.689. The requirements of this rule include, but are not limited to, the following:

- (1) Air emissions from off-site material transfer systems (i.e. pipes, hoses) shall be controlled by the use of continuous hard-piping. All joints or seams between the pipe sections shall be permanently or semi-permanently sealed (e.g., a welded joint between two sections of

metal pipe or a bolted and gasketed flange).

- (2) The Permittee shall control the HAP emitted from equipment leaks in accordance with the applicable provisions of sections 61.242 through 61.247 in 40 CFR 61, Subpart V, National Emission Standard for Equipment Leaks (Fugitive Emission Sources).

### **State Rule Applicability - Entire Source**

#### **326 IAC 2-2 (Prevention of Significant Deterioration)**

Pursuant to 326 IAC 2-2 (Prevention of Significant Deterioration), this source is a major source because it is 1 of the 28 listed source categories and the potential to emit of at least one criteria pollutant is more than 100 tons per year. This source has never been reviewed under the requirements of 326 IAC 2-2 (PSD).

#### **326 IAC 2-6 (Emission Reporting)**

This source is subject to 326 IAC 2-6 (Emission Reporting), because it has the potential to emit more than one hundred (100) tons per year of VOC. Pursuant to this rule, the owner/operator of the source must annually submit an emission statement for the source. The annual statement must be received by July 1 of each year and contain the minimum requirement as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8) (Emission Statement Operating Year).

#### **326 IAC 4-1 (Open Burning)**

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1.

#### **326 IAC 5-1 (Opacity)**

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

#### **326 IAC 6-4 (Fugitive Dust Emissions)**

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions).

#### **326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)**

ESSROC is not subject to the requirements of 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations) because they are located in Cass County.

Pursuant to Agreed Order A-4202 entered into on June 9, 1999, fugitive particulate matter emissions shall be controlled according to the plan approved by IDEM on February 8, 2000, as may

be amended from time to time with IDEM approval. The plan consists of:

- (a) Water sprays shall be used to control fugitive emissions from the primary apron feeder at the crusher department on an as-needed basis. Due to safety concerns, these water spray are not operated when the temperature is below 35 degrees F or when freezing can occur.
- (b) Vehicular traffic is to follow established roadways (paved and unpaved) and observe the posted speed limits.
- (c) Equipment is to be operated in such a manner as to minimize spills.
- (d) Spilled materials shall be cleaned up in a timely manner.
- (e) Leaks in potential sources of fugitive emissions shall be repaired in a timely manner.
- (f) The road sweeper is to be operated as needed, weather conditions permitting.
- (g) The water spray truck is to be operated as needed; however, due to safety concerns, the water spray truck is not operated when the temperature is below 35 degrees F or frozen conditions exist/occur while the roadways are wet.
- (h) Conveyors will be maintained to minimize fugitive dust emissions.
- (i) During unloading, material handling, and material transfer operations, free fall heights from the feed belts shall be minimized.
- (j) Parking lots/areas
  - (1) The paved lots are used solely for visitor parking and do not handle any traffic volume. These areas are on the route of the road sweeper.
  - (2) The unpaved lots are used primarily for employee parking and do not handle a high volume of traffic. These lots are on the route of the water spray truck. These lots are wetted on an as-needed basis.
- (k) The area around the storage piles are to be maintained in such a manner as to minimize the potential for fugitive particulate matter emissions.

The agreed order expired on June 30, 2002; therefore, no fugitive dust plan is in force at this time.

### **State Rule Applicability - Significant Activities**

#### **326 IAC 2-2 (Prevention of Significant Deterioration (PSD))**

In order to render the requirements of PSD not applicable, the following conditions shall apply:

- (a) The PM emissions from baghouse 136 (CE403) controlling the #1 recycled dust scoop/insufflation system (EU411) shall not exceed 4.11 pounds per hour.
- (b) The PM10 emissions from baghouse 136 (CE403) controlling the #1 recycled dust scoop/insufflation system (EU411) shall not exceed 2.40 pounds per hour.

- (c) The PM emissions from baghouse 137 (CE420) controlling the #2 recycled dust scoop/insufflation system (EU420) shall not exceed 1.37 pounds per hour.
- (d) The PM10 emissions from baghouse 137 (CE420) controlling the #2 recycled dust scoop/insufflation system (EU420) shall not exceed 0.80 pounds per hour.

Therefore, the requirements of 326 IAC 2-2 (PSD) are not applicable. The Part 70 permit requires stack testing to be conducted to demonstrate compliance with these limits.

The EPA has issued a notice of violation alleging that the kilns are not in compliance with the requirements of PSD. The EPA alleges that ESSROC made modifications to the kilns, and began using pet coke as a fuel in the kilns, both of which triggered the requirements of PSD. This case is on-going and has not yet been resolved; therefore, no detailed compliance plan has been established. IDEM has included language in the Part 70 permit stating that the permit shield will not apply to the kilns with regards to the requirements of 326 IAC 2-2 (PSD). Once the enforcement case has been resolved, IDEM will reopen the permit to establish the permit shield for the kilns and, if necessary, include the provisions of the compliance plan in the Part 70 permit.

#### 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

The kilns and clinker coolers are not subject to the requirements of this rule, because each of the kilns and clinker coolers is subject to a more stringent limit pursuant to the requirements of 40 CFR 63 Subpart LLL (for the clinker coolers) or 40 CFR 63 Subpart EEE (for the kilns).

Pursuant to ESSROC's current operating permits and 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emissions from the various processes shall not exceed an amount determined by the appropriate equation specified below. ESSROC's previous operating permits did not specify the exact limits pursuant to this rule, nor did they explain which facilities/emission units were considered to be one "process" pursuant to the rule. Therefore, it is necessary to make such determinations prior to calculating the limits.

First a determination of what constitutes a process must be made. The definition of manufacturing process in 326 IAC 6-3-1.5(a)(2) is "any single or series of actions, operations, or treatments in which a mechanical, physical, or chemical transformation of material occurs that emits, or has the potential to emit, particulate in the production of the product. The term includes transference, conveyance, or repair of a product." As stated, this definition could lead to an interpretation that the manufacturing of Portland cement from start to finish could be considered a process. However, the IDEM, OAQ has historically viewed processes as groups of equipment that are physically connected and perform a similar function (i.e. the storage or handling of material). In making the determination, the definition for process weight rate in 326 IAC 1-2-59 was relied upon when more than one interpretation could be made. The last paragraph of the definition states: "When the nature of any process or operation or the design of any is such as to permit more than one interpretation for this definition, the interpretation that results in the minimum value for allowable emission shall apply." The determinations were made as follows:

- (1) The raw material sizing equipment, including the raw material loading and unloading (EU112 and EU114), apron feeder (EU115), primary crusher (EU116), clean-up screw (EU117), impact apron feeder (EU118), belt #1 covered conveyor (EU119), screen transfers (EU120), belt #2 covered conveyor (EU121), secondary crusher (EU122), and belt #3 covered conveyor (EU201) were grouped together as one process because they operate in sequence, are dependent on each other and are used to accomplish one goal, being the sizing and preparation of the quarried material.

- (2) The clay unloading process (EU123), wobbler feeder (EU124), log washer system (EU125), and the waste gravel loading process (EU127), were grouped together as one process, because they operate in sequence, are dependent on each other and are used to accomplish one goal, being the storage and transfer of clay.
- (3) The crane storage facilities including limestone storage bins (EU202), Missouri clay storage bins (EU203), west flyash truck unloading (EU210), west flyash holding tank (EU211), east flyash truck unloading (EU213), and east flyash storage tank (EU214), were grouped together as one process, because they operate in sequence, are dependent on each other and are used to accomplish one goal, being the storage of any raw materials.
- (4) The raw mill facilities including three belt feeders (EU205), Missouri clay belt feeder (EU206), iron feeder (EU207), covered cross belt (EU208), covered raw mill feed belt (EU209), transfer screw to raw mill (EU212), east short covered screw (EU215), and E-W long covered screw (EU216), were grouped together as one process, because they operate in sequence, are dependent on each other and are used to accomplish one goal, being the transfer of any raw materials.
- (5) The Unloading station facilities including the railroad unloading (EU307), unloading station hopper (EU308), belt feeder (EU309), belt 7 covered conveyor (EU310), conveyor transfer to outside storage (EU311), were grouped together as one process because they operate in sequence, and are used to accomplish one goal, being the unloading and handling of fossil fuels.
- (6) The fossil fuel facilities including the spare storage bin (EU314), coal/coke storage bin (EU315), two (2) gypsum storage bins (EU316), spare belt feeder to belt 8 (EU317), coal/coke belt feeder to belt 8 (EU318), belt 8 to coal/coke tanks (EU319), coal/coke tank #1 (EU320), belt feed to coal mill #1 (EU321), coal/coke cross belt (EU322) coal/coke tank #2 (EU323) and belt feed to coal mill #2 (EU324) were grouped together as one process because they operate in sequence and are used to accomplish one goal, being the fossil fuel storage and transfer to the kilns.
- (7) The recycled CKD operations including the #1 recycled dust elevator (EU408), recycled dust holding tank (EU409), feeder screw & F-K pump (EU410), and #1 recycled dust scoop system (EU411) were grouped together because they operate in sequence dependent on each other, and are used to accomplish one goal, being the recycling of cement kiln dust from kiln #1.
- (8) The #2 recycled CKD operations including the #2 recycled dust elevator (EU417), recycled dust holding tank (EU418), feeder screw & F-K pump (EU419), and #2 recycled dust scoop system (EU420) were grouped together because they operate in sequence dependent on each other, and are used to accomplish one goal, being the recycling of cement kiln dust from kiln #1.
- (9) The covered 16" cross screw (EU403), the #1 waste dust elevator (EU404), the discharge hopper screws (EU402), and the 9" cross screw (EU405) were grouped together because they operate in sequence and are used to accomplish one goal, being the disposal of waste dust from kiln #1.
- (10) The covered 16" cross screw (EU415), the #2 waste dust elevator (EU416), and the discharge hopper screws (EU414), were grouped together because they operate in sequence and are used to accomplish one goal, being the disposal of waste dust from kiln



#2.

- (11) The waste dust tank (EU406) and truck loading (EU407) were grouped together because they operate in sequence and are used to accomplish one goal, being the storage and loadout of waste dust from both waste dust disposal systems.
- (12) The clinker exiting the coolers is transferred to the storage bins. The #1 clinker drag conveyor (EU501), #1 CCDC screws (EU502), #1 clinker elevator (EU503) and clinker conveyor transfer system (EU504) were grouped together because they are interconnected facilities that have one specific function which is to transfer clinker from the coolers to the storage bins.
- (13) The clinker exiting the coolers is transferred to the storage bins. The #2 clinker drag conveyor (EU516), #2 CCDC screws (EU517), #2 clinker elevator (EU518) and clinker conveyor transfer system circuit (EU519) were grouped together because they are interconnected facilities that have one specific function which is to transfer clinker from the coolers to the storage bins.
- (14) The clinker is then transferred from the storage bins to the finish mills. The clinker bin 1 finish mill #1 (EU505), the stone/clinker bin 2 finish mill #1 (EU506), clinker bin 3 finish mill #1 (EU507), clinker bin 1 feeder (EU508), stone/clinker bin 2 feeder (EU509), the gypsum feed belt (EU511), clinker bin 1 #2 finish mill (EU520), clinker bin 2 #2 finish mill (EU521), clinker bin 1 feeder (EU523), clinker bin 2 feeder (EU524), and FM #2 gypsum feeder (EU525) were grouped together because they have one specific function which is to transfer all clinker from the storage bins to the finish mills.
- (15) Although the finish mills #1 and #2 (EU601 through EU603) and (EU604 through EU606), respectively, perform similar functions, they are operated independently such as to allow each finish mill to produce a slightly different grade of cement and are not physically connected to each other. Therefore, they were considered separate processes.
- (16) The silo operations and the silo transfers (EU703 through EU705) and (EU707 through EU711) were grouped together because they are physically connected, are operated dependently in sequence, and are used to accomplish the same goal, which is storage and transfer of finish material to the loading facilities.
- (17) The east truck loadout (EU706), the west truck loadout (EU712), and the railroad loadout (EU713) were not grouped together because they can operate independently.
- (18) The masonry packing operations (EU801 through EU803) and the portland packing operations (EU804 through EU806) were not grouped together because they can operate independently.

The limitations for these facilities were calculated using the following equations

- (1) All facilities with a maximum capacity of 30 tons per hour or more were calculated by the following equation:

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40$$

where E = rate of emission in pounds per hour and

P = process weight rate in tons per hour

When the process weight rate exceeds 200 tons per hour, the maximum allowable emission may exceed the pound per hour limit calculated using the above-referenced equation, provided the concentration of particulate matter in the discharge gases to the atmosphere is less than 0.10 pounds per on thousand (1,000) pounds of gases.

- (2) The limitations for all other facilities, were calculated by the following equation:

$$E = 4.1 P^{0.67}$$

where E = rate of emission in pounds per hour and  
P = process weight rate in tons per hour

Therefore the limits for the various facilities are as follows:

Processes	Units	Process Weight Rate (P)	Allowable Emissions (lbs/hour) (E)
Raw Material Sizing	EU112 through EU122, and EU201	550	70.1
Raw Material Storage and Handling	EU123 through EU125, and EU127	30	39.96
Raw Material Storage process	EU202, EU204, EU210, EU211, EU213, and EU214	200	58.51
Clinker transfer from storage bins to finish mills	EU505 through EU509, EU511, EU520, EU521, and EU523 through EU525	45	43.6
Raw mill facilities	EU205 through EU209, EU212, EU215, and EU216	175	57.07
Unloading station facilities	EU307 through EU311	200	58.51
Fossil Fuel facilities	EU314 through EU324	200	58.51
Kiln #1 CKD recycling	EU408 through EU411	15	25.16
Kiln #2 CKD recycling	EU417 through EU420	15	25.16
Waste Dust Recycling for Kiln #1	EU402 through EU405	15	25.16
Waste Dust Recycling for Kiln #2	EU414 through EU416	15	25.16
Waste Dust Loadout for both Waste Dust Systems	EU406 and EU407	30	39.96
Clinker #1 Handling	EU501 through EU504	42	42.97
Clinker #2 Handling	EU516 through EU519	42	42.97
Gypsum and Clinker Handling to Finish Mills	EU520, EU521, EU523, and EU524	45	43.6
Finish Mill #1	EU601 through EU603	45	43.6
Finish Mill #2	EU604 through EU606	45	43.6

Processes	Units	Process Weight Rate (P)	Allowable Emissions (lbs/hour) (E)
Silo Operations and Silo Transfers	EU703 through EU705, and EU707 through EU711	420	66.89
West Bulk truck loadout	EU712	450	67.7
Truck / RR car unloading	EU702	100	51.28
Bulk RR loadout	EU713	100	51.28
East bulk truck loadout	EU706	450	67.7
Masonry Packing Operations	EU801 through EU803	44	43.4
Portland Packing Operations	EU804 through EU806	44	43.4

Based on baghouse characteristics and stack test results the facilities can comply with 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes). Since no stack tests have ever been performed on the raw mills and finish mills, the Part 70 permit will require PM testing from these facilities to demonstrate compliance with the limits.

#### 326 IAC 7-1.1 ( Sulfur Dioxide Emission Limitations)

The kilns are subject to this rule because each kiln has the potential to emit greater than 25 tons per year or 10 pounds per hour of SO<sub>2</sub>. The SO<sub>2</sub> emissions from each of the kilns shall not exceed 6.0 pounds per million Btu of heat input when combusting coal or a combination of coal and oil. The sulfur content of the coal combusted shall not exceed 4.1 weight percent. Compliance shall be determined on a calendar month average.

#### 326 IAC 7-2-1 (Sulfur Dioxide Compliance Reporting)

Pursuant to this rule, a quarterly report shall be submitted including the average sulfur content, heat content, the sulfur dioxide emission rate in pounds per million Btu, and the coal consumptions. Coal sampling and analysis data shall be collected pursuant to the procedures specified in 326 IAC 3-7-2 for coal combustion.

#### 326 IAC 8-1-6

None of the facilities at this plant are subject to the requirements of this rule because they all have the potential to emit less than 25 tons per year of VOC and/or they were constructed prior to January 1, 1980. No other 326 IAC 8 rules apply to any of the significant emission units at this source.

#### 326 IAC 10-3 (NOx Reduction Requirements)

The requirements of 326 IAC 10-3 do not apply to the kilns because they are not long dry kilns as defined in 326 IAC 10-3-2(5) because they are less than 14 feet in diameter. Therefore, the requirements of 326 IAC 10-3 do not apply to the kilns.

### State Rule Applicability - Insignificant Activities

#### 326 IAC 8-4-3 (Petroleum Liquid Storage Facilities)

All of the petroleum storage tanks at ESSROC have capacities less than 39,000 gallons. Therefore, the requirements of 326 IAC 8-4-3 do not apply.

326 IAC 8-4-6 (Gasoline Dispensing Facilities)

The gasoline dispensing facility at ESSROC was constructed prior to July 1, 1989, and has monthly gasoline throughputs of less than 10,000 gallons. Therefore, the requirements of 326 IAC 8-4-6 do not apply.

326 IAC 8-3-2 (Cold Cleaner Operations) and 326 IAC 8-3-5 (Cold Cleaner Degreaser Operation and Control)  
The parts washers are subject to the requirements of these rules. Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), the Permittee shall:

- (a) Equip the cleaner with a cover;
- (b) Equip the cleaner with a facility for draining cleaned parts;
- (c) Close the degreaser cover whenever parts are not being handled in the cleaner;
- (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) Provide a permanent, conspicuous label summarizing the operation requirements;
- (f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), for a cold cleaner degreaser facility, the Permittee shall ensure that the following control equipment requirements are met:

- (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
  - (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));
  - (B) The solvent is agitated; or
  - (C) The solvent is heated.
- (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.
- (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
- (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
- (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is

greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9°C) (one hundred twenty degrees Fahrenheit (120°F)):

- (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
  - (B) A water cover when solvent is used is insoluble in, and heavier than, water.
  - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller of carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), for a cold cleaning facility, the Permittee shall ensure that the following operating requirements are met:
- (1) Close the cover whenever articles are not being handled in the degreaser.
  - (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
  - (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

## Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in permit Section D are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also in permit Section D. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this source are as follows:

1. The various processes at ESSROC's production plant have applicable compliance monitoring conditions as specified below:

- (a) Visible emissions notations of the controlled stack exhausts shall be performed once per shift during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
- (b) The Permittee shall record the total static pressure drop across each baghouse, at least once per shift when the associated facility is in operation. When for any one reading, the pressure drop across a baghouse is outside the normal range of 2.0 and 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside of the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
- (c) The ability of the ESP to control particulate emissions shall be monitored continuously, when the kilns are in operation, by measuring and recording the ESP total power. From the date of issuance of this permit until the approved stack test results are available, appropriate response steps shall be taken in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports whenever the total power of the ESP is below 30.9 kW. The Permittee shall determine the total power of the ESP from the most recent valid stack test as approved by IDEM, that demonstrates compliance with the limits in this permit. On and after the date the approved stack test results are available appropriate response steps shall be taken in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports whenever the total power of the ESP is below the total power during the compliance stack test. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

The instrument used for determining the total power shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every twelve (12) months.
- (d) In order to document compliance with the applicable PM and dioxin/furan limits specified in 40 CFR 63, Subpart EEE the following inspections shall be performed for the ESP during each annual shutdown, but no less often than once every 14 months, in accordance with the Preventive Maintenance Plan prepared in

accordance with Section B - Preventive Maintenance Plan:

- (1) Plate and electrode alignment;
- (2) ESP component/controller failure;
- (3) Air and water infiltration; and
- (4) Calibration of the instruments used to determine the T-R set current and voltages.

All inspections shall be made whenever there is an outage of any nature lasting more than three days unless such measurements have been taken within the past three months.

Appropriate response steps for any failures, malfunctions, or abnormal conditions in the above list found during the inspection shall be taken in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

- (e) The instrument used for determining the T-R set voltage shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
- (f) The ability of the ESP to control particulate emissions shall be monitored by continuously measuring and recording the opacity of emissions from the kiln stack exhaust (EP401).
  - (1) Appropriate response steps shall be taken in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, whenever the opacity exceeds 18 percent. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
  - (2) The opacity shall be determined by the certified continuous opacity monitor required in the permit.
- (g) An inspection shall be performed each calendar quarter of all bags. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. Inspections required by this permit shall not be performed in consecutive months. All defective bags shall be replaced.
- (h) In the event that bag failure has been observed:
  - (1) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the

emergency provisions of this permit (Section B- Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

- (2) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then the failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).
- (i) Pursuant to 326 IAC 3-5 (Continuous Monitoring of Emissions), 326 IAC 2-1.1-11 and 40 CFR Part 63, a continuous monitoring system shall be installed, calibrated, maintained, and operated for measuring opacity from each of the kilns. The continuous monitoring systems shall meet the performance specifications of 326 IAC 3-5-2.
- (j) Pursuant to 326 IAC 3-5 (Continuous Monitoring of Emissions) and 326 IAC 2-1.1-11, and 40 CFR Part 63 a continuous monitoring system shall be installed, calibrated, maintained, and operated for measuring opacity from each of the clinker coolers. The continuous monitoring systems shall meet the performance specifications of 326 IAC 3-5-2.
- (k) The following stack tests are required to be performed.

Emission Units	Control Devices	Tests Required	Applicable Rules for which to test
kilns	ESP #1	PM, benzene, and all pollutants required to be tested under the HWC MACT	40 CFR 63, Subpart EEE, 40 CFR 61, Subpart FF
clinker cooler #1	baghouse 107	PM	40 CFR 63, Subpart LLL
clinker cooler #2	baghouse 111	PM	40 CFR 63, Subpart LLL



Emission Units	Control Devices	Tests Required	Applicable Rules for which to test
#1 recycled dust scoop/insufflation system (EU411)	baghouse 136	PM and PM10	limits to render 326 IAC 2-2 not applicable
#2 recycled dust scoop / insufflation system (EU420)	baghouse 137	PM and PM10	limits to render 326 IAC 2-2 not applicable
finish mill #1 (EU601-EU603)	baghouses 117a, 117b, 118, and 119	PM	326 IAC 6-3-2
finish mill #2 (EU604-EU606)	baghouses 114, 115, and 116	PM	326 IAC 6-3-2
raw mill (EU205-EU209, EU212, EU215, and EU216)	baghouse 105	PM	326 IAC 6-3-2

In addition to the testing requirement shown in the table above, all facilities subject to the requirements of 40 CFR 63, Subpart LLL, or 40 CFR 60 Subpart Y shall perform the required Method 9 opacity testing. At this time, the Part 70 permit is not requiring testing for any other facilities at this plant.

These monitoring conditions are necessary because the baghouses and ESPs for the processes must operate properly to ensure compliance with 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), 326 IAC 2-2 (Prevention of Significant Deterioration), 326 IAC 5-1 (Opacity), 40 CFR 63, Subpart EEE (NESHAP for Hazardous Waste Combustors), 40 CFR 63, Subpart LLL (NESHAP for Portland Cement Plants) and 326 IAC 2-7 (Part 70).

## Conclusion

The operation of this Portland cement manufacturing operation shall be subject to the conditions of the attached proposed Part 70 Permit No. T017-6033-00005.

**Attachment A**  
**(fugitive dust control plan)**

# Fugitive Particulate Matter Emission Control Plan

## Table Of Contents

### REPORT

- I. INTRODUCTION
- II. DESCRIPTION OF OPERATIONS
- III. POTENTIAL FUGITIVE DUST PROCESSES
- IV. VEHICULAR ACTIVITY
- V. CONTROL MEASURES

## I. INTRODUCTION

THIS DOCUMENT CONSTITUTES THE *FUGITIVE PARTICULATE MATTER EMISSION CONTROL PLAN (PLAN)* FOR THE ESSROC CEMENT CORP. (ESSROC), LOGANSPORT, INDIANA PLANT LOCATED IN CASS COUNTY.

TYPICALLY, CEMENT PLANTS QUARRY THE LIMESTONE ON-SITE. DEPENDING ON THE ELEMENTAL QUALITY OF THE STONE, THE PLANT MAY SUPPLEMENT THE QUARRIED LIMESTONE WITH PURCHASED MATERIALS SUCH AS CLAYS, FLYASHES AND/OR BOTTOM ASHES TO PROVIDE THE BASIC ELEMENTS OF SILICA, ALUMINA AND IRON.

THE LOGANSPORT OPERATIONS HAS BEEN PRODUCING PORTLAND AND MASONRY CEMENT FOR OVER 35 YEARS.

**OPERATOR:**

ESSROC CEMENT CORP.  
STATE ROAD 25 SOUTH  
3084 WEST COUNTY ROAD 225 SOUTH  
LOGANSPORT, IN 46947  
(219) 753-5121

**OWNER:**

ESSROC CORP.  
3251 BATH PIKE  
NAZARETH, PA 18064-0032  
(800) 523-9238

**CONTACT:**

PLANT MANAGER  
KEN GILLESPIE

SENIOR ENVIRONMENTAL MANAGER  
BRIAN GRAF

## II. DESCRIPTION OF OPERATIONS

ESSROC HAS A DESIGN LAYOUT CONSISTING OF RAW MATERIAL AND FOSSIL FUEL RECEIVING/STORAGE AREAS, TWO RAW MILL SYSTEMS, TWO KILN SYSTEMS, TWO FINISH MILL SYSTEMS, A CEMENT STORAGE AND SHIPPING FACILITY AND A WASTE-DERIVED FUEL RECEIVING/STORAGE FACILITY. PORTLAND CEMENT CLINKER IS PRODUCED USING TWO IDENTICALLY SIZED WET PROCESS ROTARY CEMENT KILNS. EACH KILN IS EQUIPPED WITH INDEPENDENT BUT IDENTICAL KILN FEED SYSTEMS [FED FROM SAME SLURRY TANK], FUEL SYSTEMS [FED FROM SAME COAL STORAGE TANK AND LWDF BURN TANK], CLINKER COOLERS AND AIR POLLUTION CONTROL DEVICES (ELECTROSTATIC PRECIPITATORS [ESPs]). BOTH KILN SYSTEMS ARE EXHAUSTED TO A COMMON STACK. THE ROTARY CEMENT KILNS AT THE LOGANSPOUT PLANT ARE DESIGNATED AS "WET PROCESS" (I.E., THE RAW MATERIAL MIX IS FED TO THE KILN AS A "SLURRY").

## III. POTENTIAL FUGITIVE DUST PROCESSES

THE PROCESSES AND AREAS LISTED BELOW HAVE THE POTENTIAL TO EMIT FUGITIVE PARTICULATE MATTER AND ARE COVERED BY THIS PLAN. ANY OTHER POTENTIAL FUGITIVE PARTICULATE MATTER SOURCE NOT LISTED BELOW HAS BEEN CONTROLLED BY DUST COLLECTION EQUIPMENT.

### Stockpiles

Description	Emission Unit	Material Handled	Typical Annual Throughput
Limestone Stockpile	EU103	Limestone	700,000
Reclaimed Clay Stockpile	EU104	Natural clay overburden	50,000
Reclaimed Clay Stockpile	EU105	Natural clay overburden	50,000
Wet Flyash Stockpile	EU106	Bottom ash	30,000
Wet Flyash Stockpile	EU107	Bottom ash	30,000
Mo. Clay Stockpile	EU110	Natural Missouri clay	20,000
Alternate Materials Stockpile	EU111	N/A	0
Waste Gravel Pile	EU126	N/A	0
Overburden Clay Stockpile	EU128	Natural clay overburden	1,000
Iron Stockpile	EU301	Iron scale	5,000
Gypsum Stockpile	EU303	Natural gypsum	30,000
Coal/Petroleum Coke Stockpile	EU305	Petroleum coke	30,000
Coal/Petroleum Coke Stockpile (Crane area)	EU312	Petroleum coke	15,000
CKD Landfill	EU423	Cement kiln dust	70,000
West Clinker Storage Pile	EU512	Clinker	450,000
West Special Clinker Storage Pile	EU513	Clinker	30,000
Crushed Special Clinker Storage Pile	EU515	Clinker	30,000
Bin #1 Clinker Spill Pile	EU522	Clinker	230,000

#### Haul Roads/Parking Areas

Description	Emission Unit	Material Handled	Typical Annual Vehicle Miles
Quarry Haul Roads	EU113	Limestone/clay bottom ash	19,000
CKD Haul Road	EU422	Cement kiln dust	16,000

#### Outdoor Conveying Operations

Description	Emission Unit	Material Handled	Typical Annual Throughput
Belt 2 Conveyor (covered)	EU121	Limestone; bottom ash Clinker	50,000
Belt 3 Conveyor (covered)	EU201	Limestone; bottom ash Clinker	850,000
Belt 7 Conveyor (covered)	EU310	Coal; Petroleum coke Gypsum	60,000
Conveyor to Outside Storage	EU311	Coal; Petroleum coke	15,000
Belt 8 Conveyor (covered) To Coal/Petroleum Coke Tanks	EU319	Coal/Petroleum coke	30,000
#1 16" Transport Screw (enclosed)	EU403	Cement kiln dust	50,000
#1 Waste Dust Elevator (enclosed)	EU404	Cement kiln dust	35,000
9" Cross Screw (enclosed)	EU405	Cement kiln dust	35,000
#2 16" Transport Screw (enclosed)	EU415	Cement kiln dust	50,000
#2 Waste Dust Elevator (enclosed)	EU416	Cement kiln dust	35,000
#1 CCDC Screws (enclosed)	EU502	Clinker	6,000
#2 CCDC Screws (enclosed)	EU517	Clinker	6,000

#### Outside Stockpile Loading, Unloading Transfer Operations

Description	Emission Unit	Material Handled	Typical Annual Throughput
Mo. Clay Unloading	EU108	Natural Missouri clay	0
Truck To Quarry Loading	EU109	Natural Missouri clay	0
Raw Material Loading	EU112	Limestone bottom ash	850,000
Raw Material Unloading	EU114	Limestone; bottom ash	850,000
Loading Waste Gravel	EU127	Screened gravel	0
Iron Unloading	EU302	Iron scale	5,000
Coal/Petroleum Coke Unloading (at Main Pile)	EU306	Coal/Petroleum coke	30,000
RR Car Unloading	EU307	Coal/Petroleum coke	0
Coal/Petroleum Coke Unloading (at Crane Area)	EU313	Coal/Petroleum coke	15,000
Gypsum Unloading		Natural gypsum	30,000
Special Clinker Loading	EU514	Clinker	30,000

**Bin, Hopper, Tank Filling Operations**

Description	Emission Unit	Material Stored	Typical Annual Throughput
Clay Unloading To Hopper	EU123	Natural clay overburden	0
Wobbler Feeder	EU124	Natural clay overburden	0
Log Washer	EU125	Natural clay overburden	0
Unloading Station Hopper	EU308	Coal/Petroleum coke Gypsum	65,000
Limestone Storage Bins (3)	EU202	Limestone; bottom ash	850,000
Mo. Clay Storage Bins	EU203	Natural Missouri clay	20,000
Iron Storage Bins	EU204	Iron scale	5,000
East Flyash Storage Tank	EU214	Flyash	20,000
Spare Storage Bin	EU314	Coal/Petroleum coke	0
Coal/Petroleum Coke Storage Bin	EU315	Coal/Petroleum coke	30,000
Gypsum Bins (2)	EU316	Gypsum	30,000
Coal/Petroleum Coke Tank #1	EU320	Coal/Petroleum coke	15,000
Coal/Petroleum Coke Tank #2	EU323	Coal/Petroleum coke	15,000
Waste Dust Tank	EU406	Cement kiln dust	70,000
Kiln #1 Recycled Dust Tank	EU409	Cement kiln dust	15,000
Kiln #2 Recycled Dust Tank	EU418	Cement kiln dust	15,000
Clinker Bin #1 - #1 Finish Mill	EU505	Clinker	110,000
Clinker Bin #2 - #1 Finish Mill	EU506	Clinker	110,000
Clinker Bin #3 - #1 Finish Mill	EU507	Clinker	230,000
Crane Unloading From Clinker Bin #3	EU510	Clinker	230,000
Clinker Bin #1 - #2 Finish Mill	EU520	Clinker	110,000
Clinker Bin #2 - #2 Finish Mill	EU521	Clinker	110,000

# Material Handling Operations

Description	Emission Unit	Material Handled	Typical Annual Throughput
Apron Feeder Transfer to Primary Crusher	EU115	Limestone; bottom ash Clinker	850,000
Clean-up Screw	EU117	Limestone; bottom ash Clinker	1,000
Screen Transfer	EU120	Limestone; bottom ash Clinker	850,000
Limestone Belt Feeders (3)	EU205	Limestone; bottom ash	850,000
Mo Clay Belt Feeder	EU206	Natural Missouri clay	20,000
Iron Feeder	EU207	Iron scale	5,000
Mo. Clay/Iron Cross Belt	EU208	Natural Missouri clay Iron scale	25,000
West Flyash Transfer (screw) to Raw Mill	EU212	Flyash	50,000
East Flyash Short Covered Screw	EU215	Flyash	20,000
Flyash E-W Long Covered Screw	EU216	Flyash	20,000
Coal/Petroleum Coke Belt Feeder To Belt 8	EU318	Coal/Petroleum coke	30,000
Spare Coal/Petroleum Coke Belt Feeder To Belt 8	EU317	Coal/Petroleum coke	0
Feed Belt To Coal Mill #1	EU321	Coal/Petroleum coke	15,000
Coal/Petroleum Coke Cross-Belt	EU322	Coal/Petroleum coke	15,000
Feed Belt To Coal Mill #2	EU324	Coal/Petroleum coke	15,000
Kiln #1 Discharge Hopper Screws (5)	EU402	Cement kiln dust	50,000
CKD Loading	EU407	Cement kiln dust	70,000
Kiln #2 Discharge Hopper Screws (5)	EU414	Cement kiln dust	50,000
Clinker Bin #1 Feeder	EU508	Clinker	110,000
Clinker Bin #1 Feeder	EU509	Clinker	110,000
Finish Mill #1 Gypsum Feed Belt	EU511	Gypsum	15,000
Clinker Bin #1 Feeder	EU523	Clinker	110,000
Clinker Bin #1 Feeder	EU524	Clinker	110,000
Finish Mill #2 Gypsum Feed Belt	EU525	Gypsum	15,000



## IV. VEHICULAR ACTIVITY

VEHICULAR ACTIVITY AT THE LOGANSPORT PLANT CONSISTS OF (ALL VALUES ARE ESTIMATES ONLY):

### ♦ PLANT PAVED ROADS

VEHICLE TYPE	TYPICAL NO. OF VEHICLES (DAILY)	ACTIVITY
LIGHT-WEIGHT CARS & TRUCKS	150	TO/FROM PARKING AREA
PNEUMATIC (CEMENT) TANKERS	100	TO/FROM BULK LOADING (SILOS)
MATERIAL DELIVERY (I.E., BOX VANS; FLATBEDS)	10	TO/FROM OFFICE RECEIVING

### ♦ PLANT UNPAVED ROADS

VEHICLE TYPE	TYPICAL NO. OF VEHICLES (DAILY)	ACTIVITY
WASTE FUEL TANKERS	20	TO/FROM TSD FACILITY

### ♦ PARKING AREAS

VEHICLE TYPE	TYPICAL NO. OF VEHICLES (DAILY)
LIGHT-WEIGHT CARS & TRUCKS	150

### ♦ HAUL ROADS (PAVED & UNPAVED)

VEHICLE TYPE	TYPICAL NO. OF VEHICLES (DAILY)	ACTIVITY
LIGHT-WEIGHT TRUCKS	2	TO/FROM QUARRY
35-TON TRUCKS	3	FROM QUARRY - TO CRUSHER
ENDLOADERS	2	TO/FROM QUARRY
ENDLOADERS	1	TO/FROM SUPPLEMENTAL STOCKPILES

## V. CONTROL MEASURES

THE CONTROL MEASURES WILL CONSIST OF:

### STOCKPILES

- ♦ THE EQUIPMENT USED TO MAINTAIN STORAGE PILE LOCATIONS CAN CONSIST OF ENDLOADERS, ROAD SCRAPPERS AND BOBCATS.
- ♦ THE AREA AROUND THE STORAGE PILES WILL BE MAINTAINED IN SUCH A MANNER AS TO MINIMIZE THE POTENTIAL FOR FUGITIVE PARTICULATE MATTER EMISSIONS.
  - (A) The area around the piles will be groomed, cleaned and maintained as necessary (i.e., on days of usage);
  - (B) Traffic flow will be restricted in and around the storage piles, will follow established patterns, and is subject to a posted speed limit of 10 mph.

### HAUL ROADS/PLANT ROADS/PARKING AREAS

- ♦ PAVED ROADS IN THE PLANT (EXCEPT QUARRY HAUL ROADS) WILL BE SWEEPED DAILY (MONDAY-FRIDAY) WITH A MECHANICAL SWEEPER, WEATHER PERMITTING.
  - (A) A Log Book will be maintained (for all swept paved roads) that includes:
    - 1) Date
    - 2) Hours of sweeping for the day
    - 3) Abnormal circumstances that prohibited sweeping, if such conditions arose
    - 4) Operators initials
- ♦ A FILE WILL BE KEPT ON DUST CONTROL APPLICATIONS APPLIED ON UNPAVED AREAS (CAN INCLUDE CONTRACTOR RECEIPTS).
- ♦ THE HAUL ROADS WILL BE KEPT FREE OF SPILLAGE OF RAW MATERIALS AND CEMENT KILN DUST DAILY.
  - (A) Unpaved haul roads will be watered, as needed. Due to safety concerns, road watering will not be conducted when the temperature is below 35°F or when the temperature is expected to fall below freezing while the roads are wet. Periodic application of calcium chloride or another suitable dust suppressant will be made on a site-specific basis, as required.
  - (B) Vehicular traffic is to follow established roadways (paved & unpaved) and observe the posted speed limits.
    1. In-plant speed limit is 15 MPH
    2. Quarry speed limit is 35 MPH
- ♦ PARKING LOTS/AREAS
  - PAVED- THE PAVED LOTS ARE USED SOLELY FOR VISITOR PARKING AND DO NOT HANDLE ANY TRAFFIC VOLUME. THESE AREAS ARE ON THE ROUTE OF THE **MECHANICAL SWEEPER**.
  - UNPAVED- THE UNPAVED LOTS ARE USED PRIMARILY FOR EMPLOYEE PARKING AND DO NOT HANDLE A HIGH VOLUME OF TRAFFIC. THESE LOTS ARE ON THE ROUTE OF **WATER SPRAY TRUCK**. THESE LOTS ARE WETTED ON AN AS-NEEDED BASIS.

### OUTDOOR CONVEYING OPERATIONS

- ♦ OUTDOOR CONVEYING OPERATIONS ARE CONTROLLED BY:
  - (A) belt covers will be maintained to minimize or eliminate fugitive emissions , as needed;
  - (B) use of totally enclosed screws and fittings.

### OUTSIDE STOCKPILE LOADING, UNLOADING & TRANSFER OPERATIONS

- ♦ OUTDOOR STOCKPILE LOADING, UNLOADING & TRANSFER OPERATIONS AND MATERIAL HANDLING WILL BE CONDUCTED IN A MANNER WHICH MINIMIZES OR ELIMINATES FUGITIVE DUST. INDIVIDUALS RESPONSIBLE FOR LOADING, UNLOADING, AND TRANSFER OF MATERIALS WILL BE TRAINED IN BEST MANAGEMENT PRACTICES (BMPs) WHICH WILL MINIMIZE OR ELIMINATE FUGITIVE EMISSIONS AND INCLUDE:
  - (A) instruction on filling the transportation containers properly by not overfilling;
  - (B) the trucks will be loaded so that no part of the load comes within 6 inches of the top of any sideboard, side panel, or tail gate;
  - (C) instruction on filling the loader bucket properly by not overfilling;
  - (D) utilizing the lowest achievable drop height; and,
  - (E) taking all reasonable precautionary measures to reduce or eliminate the generation of fugitive dust.
- ♦ UNLOADING & TRANSFER OPERATIONS TO BINS, HOPPERS AND TANKS ARE CONTROLLED BY:
  - (A) connecting feeders directly to bins, hoppers and tanks;
  - (B) minimizing free-fall heights from the feed belts;
  - (C) repair leaks in potential sources of fugitive emissions in a timely manner.

### MATERIAL HANDLING OPERATIONS

- ♦ MATERIAL HANDLING OPERATIONS ARE CONTROLLED BY:
  - (A) Use of water sprays to control fugitive emissions from the Primary Apron Feeder at the Crusher Department on an as-needed basis. Due to safety concerns, water sprays are not operated when the temperature is below 35°F or when freezing can occur;
  - (B) Operate equipment in such a manner as to minimize spills;
  - (C) Connecting feeders directly to bins, hoppers and tanks;
  - (D) Minimizing free fall heights from the feed belts;
  - (E) Use of totally enclosed screws and fittings.

## Appendix A: Emissions Calculations

Company Name: ESSROC - Logansport Plant  
 Address City IN Zip: State Road 25 South, 3084 West CR 225 South, Logansport, IN 46947  
 T: 017-6033  
 Plt ID: 017-00005  
 Reviewer: Nisha Sizemore

Emissions From: Baghouse CE101 controlling Primary Crusher (EU116), Impact apron feeder (EU118), and belt 1 covered conveyor (EU119).

Controlled Emissions:

$$\frac{0.04 \text{ gr/acfm} \times 10100 \text{ acfm} \times \frac{60 \text{ min/hr}}{7000 \text{ gr/lb}}}{1} = 3.46 \text{ lbs/hour} = 15.17 \text{ tons/yr}$$

Efficiency of Baghouse: 99.8%

$$\text{Potential Emissions} = \frac{\text{Controlled Emissions}}{(1 - \text{Efficiency (\%)})} = \frac{3.46}{(1 - 0.998)} = 1731 \text{ lbs/hr} = 7583.66 \text{ tons/yr}$$

Emissions From: Baghouse CE102 controlling Secondary Crusher (EU122) and belt 1 covered conveyor (EU119).

Controlled Emissions:

$$\frac{0.04 \text{ gr/acfm} \times 3900 \text{ acfm} \times \frac{60 \text{ min/hr}}{7000 \text{ gr/lb}}}{1} = 1.34 \text{ lbs/hour} = 5.86 \text{ tons/yr}$$

Efficiency of Baghouse: 99.8%

Emissions From: Baghouse CE201 controlling covered raw mill feed belt (EU209).

Controlled Emissions:

$$\frac{0.04 \text{ gr/acfm} \times 8000 \text{ acfm} \times 60 \text{ min/hr}}{7000 \text{ gr/lb}} = 2.74 \text{ lbs/hour} = 12.01 \text{ tons/yr}$$

Efficiency of Baghouse: 99.8%

$$\text{Potential Emissions} = \frac{\text{Controlled Emissions}}{(1 - \text{Efficiency (\%)})} = 1371 \text{ lbs/hr} = 6006.86 \text{ tons/yr}$$

Controlled Emissions: Baghouse CE202 controlling west flyash truck unloading (EU210).

$$\frac{0.04 \text{ gr/acfm} \times 2000 \text{ acfm} \times 60 \text{ min/hr}}{7000 \text{ gr/lb}} = 0.69 \text{ lbs/hour} = 3.00 \text{ tons/yr}$$

Efficiency of Baghouse: 99.3%

$$\text{Potential Emissions} = \frac{\text{Controlled Emissions}}{(1 - \text{Efficiency (\%)})} = 97.96 \text{ lbs/hr} = 429.06 \text{ tons/yr}$$

Controlled Emissions: Baghouse CE203 controlling west flyash holding tank (EU211).

$$\frac{0.04 \text{ gr/acfm} \times 2000 \text{ acfm} \times \frac{60 \text{ min/hr}}{7000 \text{ gr/lb}}}{1} = 0.69 \text{ lbs/hour} = 3.00 \text{ tons/yr}$$

Efficiency of Baghouse: 99.3%

$$\text{Potential Emissions} = \frac{\text{Controlled Emissions}}{(1 - \text{Efficiency (\%)})} = \frac{0.69 \text{ lbs/hr}}{(1 - 0.993)} = 97.96 \text{ lbs/hr} = 429.06 \text{ tons/yr}$$

Emissions From: Baghouse CE204 controlling east flyash truck unloading (EU213).

Controlled Emissions:

$$\frac{0.04 \text{ gr/acfm} \times 2500 \text{ acfm} \times \frac{60 \text{ min/hr}}{7000 \text{ gr/lb}}}{1} = 0.86 \text{ lbs/hour} = 3.75 \text{ tons/yr}$$

Efficiency of Baghouse: 99.3%

$$\text{Potential Emissions} = \frac{\text{Controlled Emissions}}{(1 - \text{Efficiency (\%)})} = \frac{0.86 \text{ lbs/hr}}{(1 - 0.993)} = 122.4 \text{ lbs/hr} = 536.33 \text{ tons/yr}$$

Controlled Emissions: ESP CE401 controlling kiln #1 (EU401).

$$\frac{0.08 \text{ gr/acfm} \times 270000 \text{ acfm} \times \frac{60 \text{ min/hr}}{7000 \text{ gr/lb}}}{1} = 185.14 \text{ lbs/hour} = 810.93 \text{ tons/yr}$$

Efficiency of Baghouse: 99.9%

$$\text{Potential Emissions} = \frac{\text{Controlled Emissions}}{(1 - \text{Efficiency (\%)})} = \frac{185.14 \text{ lbs/hr}}{(1 - 0.999)} = 185140 \text{ lbs/hr} = 810925.71 \text{ tons/yr}$$

Emissions From: Baghouse CE402 controlling #1 and #2 recycled dust elevators (EU408 and EU409), feeder screw (EU419) and F-K pump (EU410).

Controlled Emissions:

$$\frac{0.04 \text{ gr/acfm} \times 7400 \text{ acfm} \times \frac{60 \text{ min/hr}}{7000 \text{ gr/lb}}}{1} = 2.54 \text{ lbs/hour} = 11.11 \text{ tons/yr}$$

Efficiency of Baghouse: 99.3%

$$\text{Potential Emissions} = \frac{\text{Controlled Emissions}}{(1 - \text{Efficiency (\%)})} = \frac{2.54 \text{ lbs/hr}}{(1 - 0.993)} = 362.4 \text{ lbs/hr} = 1587.53 \text{ tons/yr}$$

Emissions From: Baghouse CE403 controlling #1 recycled dust scoop system (EU411).

Controlled Emissions:

$$\frac{0.04 \text{ gr/acfm} \times 2400 \text{ acfm} \times 60 \text{ min/hr}}{7000 \text{ gr/lb}} = 0.82 \text{ lbs/hour} = 3.60 \text{ tons/yr}$$

Efficiency of Baghouse: 99.3%

$$\text{Potential Emissions} = \frac{\text{Controlled Emissions}}{(1 - \text{Efficiency (\%)})} = \frac{3.60}{(1 - 0.993)} = 514.87 \text{ tons/yr}$$

Emissions From: Baghouse CE404 controlling clinker cooler #1 (EU412)

Controlled Emissions:

$$\frac{0.04 \text{ gr/acfm} \times 49500 \text{ acfm} \times 60 \text{ min/hr}}{7000 \text{ gr/lb}} = 16.97 \text{ lbs/hour} = 74.33 \text{ tons/yr}$$

Efficiency of Baghouse: 99.8%

$$\text{Potential Emissions} = \frac{\text{Controlled Emissions}}{(1 - \text{Efficiency (\%)})} = \frac{74.33}{(1 - 0.998)} = 37167.43 \text{ tons/yr}$$



Emissions From: Baghouse CE405 controlling wet kiln #2 (EU413)

Controlled Emissions:

$$\frac{0.08 \text{ gr/acfm} \times 270000 \text{ acfm} \times 60 \text{ min/hr}}{7000 \text{ gr/lb}} = 185.14 \text{ lbs/hour} = 810.93 \text{ tons/yr}$$

Efficiency of Baghouse: 99.9%

Emissions From: Baghouse CE406 controlling #2 recycled dust scoop system (EU420)

Controlled Emissions:

$$\frac{0.04 \text{ gr/acfm} \times 800 \text{ acfm} \times 60 \text{ min/hr}}{7000 \text{ gr/lb}} = 0.27 \text{ lbs/hour} = 1.20 \text{ tons/yr}$$

Efficiency of Baghouse: 99.0%

Emissions From: Baghouse CE407 controlling clinker cooler #2.

Controlled Emissions:

$$\frac{0.04 \text{ gr/acfm} \times 49500 \text{ acfm} \times 60 \text{ min/hr}}{7000 \text{ gr/lb}} = 16.97 \text{ lbs/hour} = 74.33 \text{ tons/yr}$$

Efficiency of Baghouse: 99.8%

$$\text{Potential Emissions} = \frac{\text{Controlled Emissions}}{(1 - \text{Efficiency (\%)})} = \frac{8486 \text{ lbs/hr}}{(1 - 99.8\%)} = 37167.43 \text{ tons/yr}$$

Emissions From: Baghouse CE501 controlling #1 clinker drag conveyor (EU501) and #1 clinker elevator (EU503).

Controlled Emissions:

$$\frac{0.04 \text{ gr/acfm} \times 10700 \text{ acfm}}{7000 \frac{\text{min/hr}}{\text{gr/lb}}} = 3.67 \text{ lbs/hour} = 16.07 \text{ tons/yr}$$

Efficiency of Baghouse: 99.8%

$$\text{Potential Emissions} = \frac{\text{Controlled Emissions}}{(1 - \text{Efficiency (\%)})} = \frac{16.07}{(1 - 0.998)} = 8034.17 \text{ tons/yr}$$

Emissions From: Baghouse CE502 controlling clinker conveyor transfer system (EU504)

Controlled Emissions:

$$\frac{0.04 \text{ gr/acfm} \times 1400 \text{ acfm}}{7000 \frac{\text{min/hr}}{\text{gr/lb}}} = 0.48 \text{ lbs/hour} = 2.10 \text{ tons/yr}$$

Efficiency of Baghouse: 99.3%

$$\text{Potential Emissions} = \frac{\text{Controlled Emissions}}{(1 - \text{Efficiency (\%)})} = \frac{2.10}{(1 - 0.993)} = 300.34 \text{ tons/yr}$$

Emissions From: Baghouse CE503 controlling #2 clinker drag conveyor (EU516) and #2 clinker elevator (EU518).

Controlled Emissions:

$$\frac{0.04 \text{ gr/acfm} \times 5400 \text{ acfm} \times 60 \text{ min/hr}}{7000 \text{ gr/lb}} = 1.85 \text{ lbs/hour} = 8.11 \text{ tons/yr}$$

Efficiency of Baghouse: 99.8%

$$\text{Potential Emissions} = \frac{\text{Controlled Emissions}}{(1 - \text{Efficiency (\%)})} = \frac{925.7 \text{ lbs/hr}}{(1 - 0.998)} = 4054.63 \text{ tons/yr}$$

Emissions From: Baghouse CE504 controlling #2 clinker drag conveyor (EU516), clinker conveyor transfer system circuit (EU519), and #2 clinker elevator (EU518).

Controlled Emissions:

$$\frac{0.04 \text{ gr/acfm} \times 5400 \text{ acfm} \times 60 \text{ min/hr}}{7000 \text{ gr/lb}} = 1.85 \text{ lbs/hour} = 8.11 \text{ tons/yr}$$

Efficiency of Baghouse: 99.8%

$$\text{Potential Emissions} = \frac{\text{Controlled Emissions}}{(1 - \text{Efficiency (\%)})} = \frac{925.7 \text{ lbs/hr}}{(1 - 0.998)} = 4054.63 \text{ tons/yr}$$

Emissions From: Baghouse CE601 controlling finish mill #1 feed belt (EU601).

Controlled Emissions:

$$\frac{0.04 \text{ gr/acfm} \times 1200 \text{ acfm} \times 60 \text{ min/hr}}{7000 \text{ gr/lb}} = 0.41 \text{ lbs/hour} = 1.80 \text{ tons/yr}$$

Efficiency of Baghouse: 99.8%

$$\text{Potential Emissions} = \frac{\text{Controlled Emissions}}{(1 - \text{Efficiency (\%)})} = \frac{205.7 \text{ lbs/hr}}{(1 - 0.998)} = 901.03 \text{ tons/yr}$$

Emissions From: Baghouse CE602 controlling finish mill #1 circuit (EU602).

Controlled Emissions:

$$\frac{0.04 \text{ gr/acfm} \times 8600 \text{ acfm} \times 60 \text{ min/hr}}{7000 \text{ gr/lb}} = 2.95 \text{ lbs/hour} = 12.91 \text{ tons/yr}$$

Efficiency of Baghouse: 99.8%

$$\text{Potential Emissions} = \frac{\text{Controlled Emissions}}{(1 - \text{Efficiency (\%)})} = \frac{1474 \text{ lbs/hr}}{(1 - 0.998)} = 6457.37 \text{ tons/yr}$$

Emissions From: Baghouse CE603 controlling separator, cooler #1, and transfer (EU603).

Controlled Emissions:

$$\frac{0.04 \text{ gr/acfm} \times 23300 \text{ acfm} \times 60 \text{ min/hr}}{7000 \text{ gr/lb}} = 7.99 \text{ lbs/hour} = 34.99 \text{ tons/yr}$$

Efficiency of Baghouse: 99.8%

$$\text{Potential Emissions} = \frac{\text{Controlled Emissions}}{(1 - \text{Efficiency (\%)})} = 3994 \text{ lbs/hr} = 17494.97 \text{ tons/yr}$$

Emissions From: Baghouses CE604a controlling finish mill #2 feed belt (EU604).

Controlled Emissions: baghouse CE604

$$\frac{0.04 \text{ gr/acfm} \times 800 \text{ acfm} \times 60 \text{ min/hr}}{7000 \text{ gr/lb}} = 0.27 \text{ lbs/hour} = 1.20 \text{ tons/yr}$$

Efficiency of Baghouse: 99.8%

$$\text{Potential Emissions} = \frac{\text{Controlled Emissions}}{(1 - \text{Efficiency (\%)})} = 137.1 \text{ lbs/hr} = 600.69 \text{ tons/yr}$$

Controlled Emissions: baghouse CE604 controlling finish mill #2 feed belt (EU604).

$$\frac{0.04 \text{ gr/acfm} \times 1750 \text{ acfm} \times 60 \text{ min/hr}}{7000 \text{ gr/lb}} = 0.60 \text{ lbs/hour} = 2.63 \text{ tons/yr}$$

Efficiency of Baghouse: 99.8%

$$\text{Potential Emissions} = \frac{\text{Controlled Emissions}}{(1 - \text{Efficiency (\%)})} = 300 \text{ lbs/hr} = 1314.00 \text{ tons/yr}$$

Total Controlled Emissions from both baghouses controlling finish mill #2 feed belt:

3.83 tons/yr

Total Potential Emissions from finish mill #2 feed belt:

1914.69 tons/yr

Emissions From: Baghouse CE605 controlling finish mill #2 circuit (EU605).

Controlled Emissions:

$$\frac{0.04 \text{ gr/acfm} \times 8600 \text{ acfm} \times 60 \text{ min/hr}}{7000 \text{ gr/lb}} = 2.95 \text{ lbs/hour} = 12.91 \text{ tons/yr}$$

Efficiency of Baghouse: 99.8%

$$\text{Potential Emissions} = \frac{\text{Controlled Emissions}}{(1 - \text{Efficiency (\%)})} = 1474 \text{ lbs/hr} = 6457.37 \text{ tons/yr}$$

Emissions From: Baghouse CE606 controlling separator, cooler #2, and transfer (EU606).

Controlled Emissions:

$$\frac{0.04 \text{ gr/acfm} \times 23300 \text{ acfm} \times 60 \text{ min/hr}}{7000 \text{ gr/lb}} = 7.99 \text{ lbs/hour} = 34.99 \text{ tons/yr}$$

Efficiency of Baghouse: 99.8%

$$\text{Potential Emissions} = \frac{\text{Controlled Emissions}}{(1 - \text{Efficiency (\%)})} = 3994 \text{ lbs/hr} = 17494.97 \text{ tons/yr}$$

Emissions From: Baghouses CE701 and CE702 controlling Truck/RR car unloading (EU701) and transfer to silos (EU702).

Controlled Emissions: baghouse CE701

$$\frac{0.04 \text{ gr/acfm} \times 2500 \text{ acfm} \times 60 \text{ min/hr}}{7000 \text{ gr/lb}} = 0.86 \text{ lbs/hour} = 3.75 \text{ tons/yr}$$

Efficiency of Baghouse: 99.8%

$$\text{Potential Emissions} = \frac{\text{Controlled Emissions}}{(1 - \text{Efficiency (\%)})} = 428.6 \text{ lbs/hr} = 1877.14 \text{ tons/yr}$$

Controlled Emissions: baghouse CE702

$$\frac{0.04 \text{ gr/acfm} \times 2500 \text{ acfm} \times 60 \text{ min/hr}}{7000 \text{ gr/lb}} = 0.86 \text{ lbs/hour} = 3.75 \text{ tons/yr}$$

Efficiency of Baghouse: 99.8%

$$\text{Potential Emissions} = \frac{\text{Controlled Emissions}}{(1 - \text{Efficiency (\%)})} = 428.6 \text{ lbs/hr} = 1877.14 \text{ tons/yr}$$

Total Controlled Emissions from both baghouses controlling truck/RR car unloading and transfer to silos:

7.51 tons/yr

Total Potential Emissions from truck/RR car unloading and transfer to silos:

3754.29 tons/yr



Emissions From: Baghouse CE703 controlling silos 11/13 (EU703).

Controlled Emissions: baghouse CE701

$$\frac{0.04 \text{ gr/acfm} \times 2300 \text{ acfm} \times 60 \text{ min/hr}}{7000 \text{ gr/lb}} = 0.79 \text{ lbs/hour} = 3.45 \text{ tons/yr}$$

Efficiency of Baghouse: 99.8%

$$\text{Potential Emissions} = \frac{\text{Controlled Emissions}}{(1 - \text{Efficiency (\%)})} = \frac{394.3 \text{ lbs/hr}}{(1 - 0.998)} = 1726.97 \text{ tons/yr}$$

Emissions From: Baghouse CE704 controlling silos 12/14/17 (EU704).

Controlled Emissions:

$$\frac{0.04 \text{ gr/acfm} \times 4600 \text{ acfm} \times 60 \text{ min/hr}}{7000 \text{ gr/lb}} = 1.58 \text{ lbs/hour} = 6.91 \text{ tons/yr}$$

Efficiency of Baghouse: 99.8%

$$\text{Potential Emissions} = \frac{\text{Controlled Emissions}}{(1 - \text{Efficiency (\%)})} = \frac{788.6 \text{ lbs/hr}}{(1 - 0.998)} = 3453.94 \text{ tons/yr}$$

Emissions From: Baghouse CE705 controlling silos 15/16/18 (EU705).

Controlled Emissions:

$$\frac{0.04 \text{ gr/acfm} \times 4600 \text{ acfm} \times \frac{60 \text{ min/hr}}{7000 \text{ gr/lb}}}{1} = 1.58 \text{ lbs/hour} = 6.91 \text{ tons/yr}$$

Efficiency of Baghouse: 99.8%

$$\text{Potential Emissions} = \frac{\text{Controlled Emissions}}{(1 - \text{Efficiency (\%)})} = \frac{788.6 \text{ lbs/hr}}{(1 - 0.998)} = 3453.94 \text{ tons/yr}$$

Emissions From: Baghouse CE706 controlling bulk truck loadout (EU706).

Controlled Emissions:

$$\frac{0.04 \text{ gr/acfm} \times 4200 \text{ acfm} \times \frac{60 \text{ min/hr}}{7000 \text{ gr/lb}}}{1} = 1.44 \text{ lbs/hour} = 6.31 \text{ tons/yr}$$

Efficiency of Baghouse: 99.8%

$$\text{Potential Emissions} = \frac{\text{Controlled Emissions}}{(1 - \text{Efficiency (\%)})} = \frac{720 \text{ lbs/hr}}{(1 - 0.998)} = 3153.60 \text{ tons/yr}$$

Emissions From: Baghouse CE707 controlling silos 1/3 (EU707).

Controlled Emissions:

$$\frac{0.04 \text{ gr/acfm} \times 2300 \text{ acfm} \times \frac{60 \text{ min/hr}}{7000 \text{ gr/lb}}}{1} = 0.79 \text{ lbs/hour} = 3.45 \text{ tons/yr}$$

Efficiency of Baghouse: 99.8%

$$\text{Potential Emissions} = \frac{\text{Controlled Emissions}}{(1 - \text{Efficiency (\%)})} = \frac{3.45 \text{ tons/yr}}{(1 - 0.998)} = 394.3 \text{ lbs/hr} = 1726.97 \text{ tons/yr}$$

Emissions From: Baghouse CE708 controlling silos 2/4 (EU708).

Controlled Emissions:

$$\frac{0.04 \text{ gr/acfm} \times 2300 \text{ acfm} \times \frac{60 \text{ min/hr}}{7000 \text{ gr/lb}}}{1} = 0.79 \text{ lbs/hour} = 3.45 \text{ tons/yr}$$

Efficiency of Baghouse: 99.8%

$$\text{Potential Emissions} = \frac{\text{Controlled Emissions}}{(1 - \text{Efficiency (\%)})} = \frac{3.45 \text{ tons/yr}}{(1 - 0.998)} = 394.3 \text{ lbs/hr} = 1726.97 \text{ tons/yr}$$

Emissions From: Baghouse CE709 controlling silos 5/7 (EU709).

Controlled Emissions:

$$\frac{0.04 \text{ gr/acfm} \times 2300 \text{ acfm} \times 60 \text{ min/hr}}{7000 \text{ gr/lb}} = 0.79 \text{ lbs/hour} = 3.45 \text{ tons/yr}$$

Efficiency of Baghouse: 99.8%

$$\text{Potential Emissions} = \frac{\text{Controlled Emissions}}{(1 - \text{Efficiency (\%)})} = 394.3 \text{ lbs/hr} = 1726.97 \text{ tons/yr}$$

Emissions From: Baghouse CE710 controlling silos 6/8 (EU710).

Controlled Emissions:

$$\frac{0.04 \text{ gr/acfm} \times 2300 \text{ acfm} \times 60 \text{ min/hr}}{7000 \text{ gr/lb}} = 0.79 \text{ lbs/hour} = 3.45 \text{ tons/yr}$$

Efficiency of Baghouse: 99.8%

$$\text{Potential Emissions} = \frac{\text{Controlled Emissions}}{(1 - \text{Efficiency (\%)})} = 394.3 \text{ lbs/hr} = 1726.97 \text{ tons/yr}$$

Emissions From: Baghouse CE711 controlling silos 9/10 (EU711).

Controlled Emissions:

$$\frac{0.04 \text{ gr/acfm} \times 2300 \text{ acfm} \times 60 \text{ min/hr}}{7000 \text{ gr/lb}} = 0.79 \text{ lbs/hour} = 3.45 \text{ tons/yr}$$

Efficiency of Baghouse: 99.8%

$$\text{Potential Emissions} = \frac{\text{Controlled Emissions}}{(1 - \text{Efficiency (\%)})} = \frac{394.3 \text{ lbs/hr}}{(1 - 0.998)} = 1726.97 \text{ tons/yr}$$

Emissions From: Baghouse CE712 controlling bulk truck loadout (EU712).

Controlled Emissions:

$$\frac{0.04 \text{ gr/acfm} \times 3600 \text{ acfm} \times 60 \text{ min/hr}}{7000 \text{ gr/lb}} = 1.23 \text{ lbs/hour} = 5.41 \text{ tons/yr}$$

Efficiency of Baghouse: 99.8%

$$\text{Potential Emissions} = \frac{\text{Controlled Emissions}}{(1 - \text{Efficiency (\%)})} = \frac{617.1 \text{ lbs/hr}}{(1 - 0.998)} = 2703.09 \text{ tons/yr}$$

Emissions From: Baghouse CE713 controlling bulk railroad loadout (EU713).

Controlled Emissions:

$$\frac{0.04 \text{ gr/acfm} \times 4200 \text{ acfm} \times 60 \text{ min/hr}}{7000 \text{ gr/lb}} = 1.44 \text{ lbs/hour} = 6.31 \text{ tons/yr}$$

Efficiency of Baghouse: 99.8%

$$\text{Potential Emissions} = \frac{\text{Controlled Emissions}}{(1 - \text{Efficiency (\%)})} = \frac{720 \text{ lbs/hr}}{(1 - 0.998)} = 3153.60 \text{ tons/yr}$$

Emissions From: Baghouses CE801 controlling transfer to masonry packer (EU801) and masonry packer (EU802), and CE802 also controlling transfer to masonry packer (EU802).

Controlled Emissions: baghouse CE801

$$\frac{0.04 \text{ gr/acfm} \times 9100 \text{ acfm} \times \frac{60 \text{ min/hr}}{7000 \text{ gr/lb}}}{1} = 3.12 \text{ lbs/hour} = 13.67 \text{ tons/yr}$$

Efficiency of Baghouse: 99.8%

$$\text{Potential Emissions} = \frac{\text{Controlled Emissions}}{(1 - \text{Efficiency (\%)})} = \frac{3.12}{(1 - 0.998)} = 1560 \text{ lbs/hr} = 6832.80 \text{ tons/yr}$$

Controlled Emissions: baghouse CE802

$$\frac{0.04 \text{ gr/acfm} \times 3000 \text{ acfm} \times \frac{60 \text{ min/hr}}{7000 \text{ gr/lb}}}{1} = 1.03 \text{ lbs/hour} = 4.51 \text{ tons/yr}$$

Efficiency of Baghouse: 99.5%

$$\text{Potential Emissions} = \frac{\text{Controlled Emissions}}{(1 - \text{Efficiency (\%)})} = \frac{1.03}{(1 - 0.995)} = 205.7 \text{ lbs/hr} = 901.03 \text{ tons/yr}$$

Total Controlled Emissions from both baghouses: 18.17 tons/yr

Total Potential Emissions: 7734 tons/yr

Emissions From: Baghouse CE803 controlling transfer to portland packer (EU804) and portland packer (EU805).

Controlled Emissions:

$$\frac{0.04 \text{ gr/acfm} \times 9000 \text{ acfm} \times \frac{60 \text{ min/hr}}{7000 \text{ gr/lb}}}{1} = 3.09 \text{ lbs/hour} = 13.52 \text{ tons/yr}$$

Efficiency of Baghouse: 99.8%

$$\text{Potential Emissions} = \frac{\text{Controlled Emissions}}{(1 - \text{Efficiency (\%)})} = \frac{13.52 \text{ tons/yr}}{(1 - 0.998)} = 6757.71 \text{ tons/yr}$$



Process	Process Weight Rate (tons/hr)	Allowable Emissions (lbs/hour)	Allowable Emissions (tons/yr)
Raw Material Sizing	550.00	70.10	307.055
Raw material Storage and Handling	30.00	39.96	175.0032
Crane Storage facilities	200.00	58.51	256.2695
clinker transfer from storage bins to finish mil	45.00	43.60	190.9763
Raw mill facilities	175.00	57.07	249.9782
unloading station facilities	200.00	58.51	256.2695
Fossil Fuel Storage and Handling to kiln	200.00	58.51	256.2695
kiln #1	42.00	not applicable	
kiln #2	42.00	not applicable	
kiln #1 CKD recycling	15.00	25.16	110.2146
kiln #2 CKD recycling	15.00	25.16	110.2146
Waste dust recycling for kiln #1	15.00	25.16	110.2146
Waste dust recycling for kiln #2	15.00	25.16	110.2146
waste CKD disposal operations	30.00	39.96	175.0032
Clinker cooler #1	42.00	not applicable	
Clinker cooler #2	42.00	not applicable	
Clinker #1 handling	42.00	42.97	188.2078
Clinker #2 handling	42.00	42.97	188.2078
Gypsum & clinker handling to finish mills	45.00	43.60	190.9763
Finish mill #1	45.00	43.60	190.9763
Finish mill #2	45.00	43.60	190.9763
Silo operations and transfers	420.00	66.89	292.9599
bulk truck loadout	450.00	67.70	296.5264
truck/RR car unloading	100.00	51.28	224.5945
bulk RR loadout	100.00	51.28	224.5945
finish product loadout old silos	450.00	67.70	296.5264
finish product masonry packing	44.00	43.40	190.0722
finish product portland packing	44.00	43.40	190.0722